

RESEARCH PLUS INC

2012 General Products

Product Number & Name Listing

. serving science since 1969

distributors of:

SECRETIN

2-METHOXYESTRADIOL

MET-ARG-PHE-ALA (MRFA)

27-HYDROXYCHOLESTEROL

NICOTINE HYDROGEN-L-TARTRATE

LUTEINIZING HORMONE (Equine) PLH

www.researchplus.com

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FOB shipping point. Net 30 days to qualified clients.

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Incorporated in 1969 in New Jersey as **Research Plus Laboratories, Inc.**, and **Research Plus Steroid Labs, Inc.** later merged into **Research Plus, Inc.**

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SPECIAL REAGENTS

§ **ABSOLUTE GRADE™ REAGENTS**

§ **BUFFERS**

§ **CESIUM & RUBIDIUM SALTS**

§ **DEXTRANS**

§ **EDTA**

§ **POLYSTYRENE MARKERS**

§ **PVP**

ABSOLUTE GRADE™ REAGENTS

01-2310-10

AMMONIUM ACETATE, Absolute grade

m.w. 77.08	[631-61-8]
Insoluble matter	0.001%
Res. On Ignition	0.004%
Chloride	1 ppm
Nitrate (NO ₃)	0.0002%
Sulfate (SO ₄)	0.0002%
Heavy Metals (Pb)	1 ppm
Iron (Fe)	1 ppm

Available in gm & kg quantities

07-8137-10

GUANIDINIUM CARBONATE, Absolute grade

m.w. 180.17	[593-850-1]
m.p. 196-198°C	
Assay: 98%	

Available in gm & kg quantities

13-2313-10

MAGNESIUM CHLORIDE Hexahydrate, Absolute grade

m.w. 77.08	[631-61-8]
Insolubles	<0.001%
Nitrate	<0.001%
Phosphate	<0.0005%
Sulfate	<0.002%
Calcium	<0.01%
Barium	<0.005%
Ammonium	<0.002%
Sodium	<0.005%
Strontium	<0.005%
Heavy Metals (Pb)	<0.0005%
Iron	<0.0005%
Manganese	<0.0005%
Potassium	<0.005%
Assay	99.0%

Available in gm & kg quantities

16-8142-10

POTASSIUM PHOSPHATE Dibasic, Absolute grade

m.w. 174.18	[7758-11-4]
LOD @ 105°	1.0%
Insoluble matter	0.01%
Chloride	0.003%
Fluoride	0.001%
Sulfate (SO ₄)	0.005%
Iron	0.001%
Arsenic	1 ppm
Heavy metals	5 ppm
Lead	5 ppm
Assay	98%

Available in gm & kg quantities

16-8143-10

POTASSIUM PHOSPHATE Monobasic, Absolute grade

m.w.	136.09	[7778-77-0]
LOD		0.2%
Insoluble matter		0.01%
Chloride		0.001%
Fluoride		0.001%
Sulfate		0.003%
Iron		0.002%
Heavy metals		0.001%
Lead		0.001%
Sodium		0005%
Assay min.		99%

Available in gm & kg quantities

16-8144-10

POTASSIUM PYROPHOSPHATE, Absolute grade

m.w.	330.34	[7320-62-7]
Chloride		0.005%
Sulfate		0.002%
Iron		0.001%
Heavy metals		0.001%
Assay min.		99%

Available in gm & kg quantities

19-8147-10

SODIUM PHOSPHATE, Dibasic, Heptahydrate, Absolute grade

m.w.	268.07	[7782-85-6]
Insolubles		0.001%
LOD @ 105°C		47.55%
PH of 5% sol. @ 25°C		8.96
Chloride		0.0003%
Nitrogen		0.0003%
Sulfate		0.001%
Arsenic		<5 ppm
Iron		0.0002%
Heavy metals		0.0002%
Assay min.		98%

Available in gm & kg quantities

19-8148-10

SODIUM PHOSPHATE, Monobasic, Absolute grade

m.w.	137.99	[10049-21-5]
Insoluble matter Ca & Amm. Hydroxide precip.		0.001%
pH of 5% @ 25°C		4.25
Chloride		0.0002%
Nitrogen		0.0007%
Sulfate		0.0003%
Arsenic		<0.000005%
Iron		0.0001%
Heavy metals		<0.0001%

Available in gm & kg quantities

BUFFERS

- 01-6312-06 **ACES** (N-(2-Acetamido)-2-aminoethane sulfonic acid)
[7365-82-4] m.w. 182.2 m.p. 281°C
- 01-6311-06 **ADA** (N-2-Acetamido) Iminodiacetic acid
[26239-55-4] m.w. 190.2 m.p. 210°C
- 02-0663-06 **BICINE** (N,N-Bis(2-hydroxyethyl) glycine)
[150-25-4] m.w. 163.2 m.p. 194-196°C
- 02-0314-06 **BIS-TRIS** (Bis (Hydroxyethyl)imino-tris-(hydroxymethyl)-methane)
[6976-37-0] m.w. 209.2
- 20-2302-06 **TES** (N-Tris (hydroxymethyl) methyl-2-amino-ethane sulfonic acid)
[7365-44-8] m.w. 229.2 m.p. 220-222°C
- 02-2303-06 **BES** (N,N-Bis (2-hydroxyethyl)-2-aminoethane sulfonic acid)
[10191-18-1] m.w. 213.3 m.p. 154-155°C
- 03-2304-06 **CAPS** (3-Cyclohexylaminopropanesulfonic acid)
[1135-40-6] m.w. 221.32 m.p. 300°C+
- 02-1430-06 **CHES** (2 (N-Cyclohexylamino)ethane sulfonic acid)
[103-47-9] m.w. 207.3
- 16-2307-06 **PIPES** (Piperazine-N,N'-Bis(2-ethanesulfonic acid, sodium))
[5625-37-6] m.w. 353.3
- 20-2308-06 **TAPS** (N-Tris (hydroxymethyl) methyl-3-amino propane sulfonic acid)
[29915-38-6] m.w. 243.2 m.p. 244-246°C
- 20-2309-06 **TRICINE** (Tris (hydroxymethyl) methylglycine)
[5704-64-1] m.w. 179.17 m.p. 182-184°C

NOTE: All products available in 100, 500 gm quantities

CESIUMS / RUBIDIUMS

The following Cesium and Rubidium salts are suitable for optical density gradient work. They are of exceptional purity as reflected by the following example of one product, namely Cesium Chloride, O.D.G grade:

Lead	0.01 ppm max.	Barium	6 ppm max.	Copper	0.005 ppm max.
Stronium	5 ppm max.	Cobalt	0.005 ppm max.	Calcium	0.095 ppm max.
Nickel	0.005 ppm max.	Magnesium	0.005 ppm max.	Zinc	0.01 ppm max.
Sodium	5 ppm max.	Iron	0.01 ppm max.	Potassium	5 ppm max.
Aluminum	0.01 ppm max.	Rubidium	10 ppm max.	Manganese	0.01 ppm max.
Lithium	0.4 ppm max.	Thallium	0.01 ppm max.		

03-0812-10 **Cesium Acetate, O.D.G. grade** [3396-11-0]

03-0812-10 **Cesium Chloride, O.D.G. grade** [7647-17-8]

03-0812-10 **Cesium Formate, O.D.G. grade** [3495-36-1]

03-0812-10 **Cesium Sulfate, O.D.G. grade** [10294-54-9]

03-0812-10 **Rubidium Bromide, O.D.G. grade** [7789-39-1]

03-0812-10 **Rubidium Chloride, O.D.G. grade** [7791-11-9]

NOTE: All products available in 25, 100 gm

DEXTRANS, POLYSULFONATES & SULFONATES

Dextran, a branched polysaccharide of D-Glucose is stable, water soluble, water absorbing, gel forming, non-volatile and neutral if used with other gums and is a unique, versatile product for potential use in industry and medicine. Its field of application shows continuing investigations in the cosmetic, foam, gel, photographic and paper industries. Dextran and its derivatives in the field of biochemical research shows potential as a blood plasma expander, in neoplasmin inhibition, lymphocyte and anti-ulcer applications. These and other research projects reveal dextran's real versatility. For these and other non-human investigations, the following are offered:

- 04-1600-06 **Dextran - m.w. 4,000 - 6,000** [9004-54-0]
- 04-1601-06 **Dextran - m.w. 8,000 - 12,000**
- 04-1602-06 **Dextran - m.w. 15,000 - 20,000**
- 04-1603-06 **Dextran - m.w. 32,000 - 48,000** (Pyrogen free)
- 04-1604-06 **Dextran - m.w. 35,000 - 50,000**
- 04-1605-06 **Dextran - m.w. 60,000 - 90,000**
- 04-1606-06 **Dextran - m.w. 60,000 - 90,000** (Pyrogen free)
- 04-1608-06 **Dextran - m.w. 200,000 - 300,000**
- 04-1612-06 **Dextran polysulfonate sodium salt - m.w. 100,000 - 200,000**

Products 1600-1608 available in 50, 100 gm quantities
Product 1612 available in 5 gm quantities

EDTA

Amino polycarboxylic chelating agents which form soluble and stable complexes with earth and heavy metals. They serve as metal activators and scavengers.

- 05-1814-06 Ethylene diaminetetraacetic acid (99% EDTA)
- 05-1815-06 Ethylene diaminetetraacetic acid disodium salt dihydrate (77% as EDTA)
- 04-1379-06 Diethylenetriamine pentaacetic acid (98% DIPA)
- 08-2962-06 Hydroxyethyl ethylenediamine triacetic acid (98% HOEDTA)

All products available in gm & kg quantities

PVP (Polyvinylpyrrolidone)

16-5917-06	Polyvinylpyrrolidone (PVP) Powder	Avg. m.w. 10,000
16-5918-06	Polyvinylpyrrolidone (PVP) Powder	Avg. m.w. 40,000
16-5920-06	Polyvinylpyrrolidone (PVP) Powder	Avg. m.w. 360,000

All products are available in 250, 500 gm quantities.

POLYSTYRENE MARKERS

The following are characterized by known weights and are suited for gel permeation chromatography, osometry, viscometry and calibrating instruments. Among others, molecular weight sedimentation velocity profile where applicable, thermal gravimetric analysis, and infra-red analysis are but some of the data available with each product.

	Nominal Molecular Wt	Mw/Mn
13-5000-06	800	1.10
13-5001-06	2,000	1.10
13-5002-06	4,000	1.10
13-5003-06	9,000	1.06
13-5004-06	17,500	1.06
13-5005-06	50,000	1.06
13-5006-06	100,000	1.06
13-5007-06	233,000	1.06
13-5008-06	390,000	1.10
13-5010-06	600,000	1.15
13-5011-06	2,000,000	1.30

All products available in 1 & 5 gm quantities

13-5012-06	Polystyrene Marker Kit (complete)
13-5013-06	Low Molecular Weight Kit 800; 2200; 4000; 9000; 17,500
13-5014-06	Intermediate Molecular Weight Kit 9000; 17,500; 50,000; 110,000; 233,000
13-5015-06	High Molecular Weight Kit 233,000; 390,000; 600,000; 2,000,000

All kits contain 1 gm each of the appropriate markers

PRODUCT CATEGORIES

§ **ALKALOIDS**

§ **AMINO ACIDS**

§ **ANTIBIOTICS**

§ **BILE PRODUCTS**

§ **BIOLOGICALLY ACTIVE PEPTIDES**

§ **CARBOHYDRATES**

§ **CARCINOGENS**

§ **ENZYMES**

§ **MISCELLANEOUS**

§ **NUCLEOSIDES**

§ **PEPTIDES**

§ **VITAMINS**

BASIC AMINO ACID DATA

Product Number	PRODUCT	m.w.	Symbol	Class	Code
01-0083-03	L-Alanine (C ₃ H ₇ NO ₂)	89.09	ALA	A,NP	A
01-0085-03**	L-Arginine Monohcl* (C ₆ H ₁₅ Cl ₄ O ₂)	210.68	ARG	A,B,P	R
018580-03	L-Asparagine Monohydrate (C ₄ H ₁₀ N ₂ O ₄)	150.14	ASN	A,P	N
01-0078-03	L-Aspartic acid (C ₄ H ₇ NO ₄)	133.11	ASP	A,Ac,P	D
03-0820-03	L-Cysteine Monohcl.H ₂ O (C ₃ H ₁₀ ClNO ₃ S)	175.64	CYS	A,P	C
03-0819-03	L-Cystine (C ₆ H ₁₂ N ₂ O ₄ S ₂)	240.30	CYST	Dimer	
07-2507-03	L-Glutamin acid (C ₅ H ₉ NO ₄)	147.14	GLU	A,Ac,P	E
07-2509-03	L-Glutamine (C ₅ H ₁₀ N ₂ O ₃)	146.15	GLN	A,P	Q
07-2506-03	Glycine (C ₂ H ₅ NO ₂)	75.07	GLY	A,P	G
08-2912-03**	L-Histidine Monohcl.H ₂ O* (C ₆ H ₂ ClN ₃ O ₃)	209.63	HIS	H,B,P	H
09-3307-03**	L-Isoleucine (C ₆ H ₁₃ NO ₂)	131.18	ILE	A,NP	I
12-4303-03**	L-Leucine (C ₆ H ₁₃ NO ₂)	131.18	LEU	A,NP	L
12-4304-03**	L-Lysine Monohcl (C ₆ H ₁₅ ClN ₂ O ₂)	182.66	LYS	A,B,P	K
13-4714-03**	L-Methionine (C ₅ H ₁₁ NO ₂ S)	149.21	MET	NP	M
15-5603-03	L-Ornithine Monohcl (C ₅ H ₁₃ ClN ₂ O ₂)	168.63	ORN	non-protein	
16-5813-03**	L-Phenylalanine (C ₉ H ₁₁ NO ₂)	165.19	PHE	Ar,NP	F
16-5814-03	L-Proline (C ₅ H ₉ NO ₂)	115.13	PRO	H,NP	P
19-6754-03	L-Serine (C ₃ H ₇ NO ₃)	105.09	SER	A,P	S
20-7211-03	L-Threonine (C ₄ H ₉ NO ₃)	119.12	THR	A,P	T
20-7213-03**	L-Tryptophan (C ₁₁ H ₁₂ N ₂ O ₂)	204.23	TRP	Ar,H,NP	W
20-7212-03**	L-Tyrosine (C ₉ H ₁₁ NO ₃)	181.19	TYR	A,P	Y
22-7852-03**	L-Valine (C ₅ H ₁₁ NO ₂)	117.15	VAL	A,NP	V

** Essential Amino Acid * Essential in Rats

A: Aliphatic Ar: Aromatic P: Polar NP: non-Polar Ac: Acidic B: Basic H: Heterocyclic

CALCULATING MOLECULAR WEIGHTS OF PEPTIDES

The following table lists amino acids by molecular weight but where one hydroxyl group (17.0) from the carboxyl end and one hydrogen (1.01) from the amine end has been removed from the known molecular weight. This allows one to quickly add up the amino acid weights listed in the table plus any auxiliary groups to determine the calculated molecular weight.

For example: L-ARG-L-PHE-L-ALA acetate.H₂O

ARG:	156.2	
PHE:	147.2	
ALA:	71.08	
acetate:	60.05	
water:		18.01
total:	452.5	
	18.01 *	
calculated formula	470.51	

ALA:	71.08
ARG:	156.2
ASN:	114.1

AUXILARY GROUPS

ASP:	116.1	AC:	60.05
CYS:	113.1 (Cysteine)	H ₂ O:	18.01
CYST:	222.3 (Cystine)	HIPPURIC:	162.15
ETH:	145.2	t-BOC:	100.22
GLU:	129.1	CBZ:	135.14
GLN:	144.1	PTHALYL:	132.11
GLY:	57.05	TRITYL:	243.3
HIS:	137.1	TOSYL:	155.18
HYD-PRO:	113.1	BENZOYL:	105.1
ILE / LEU:	113.2	CHLOROACETYL:	77.5
LYS:	128.2	CYCLOHEXYLAMINE:	99.17
MET:	131.2	AMIDE:	-2
NLE:	113.2	HCL:	36.47 (subtract)
ORN:	114.1	HBR:	80.92
PHE:	147.2	BENZYL:	89.14
PRO:	97.11	HIPPURYL:	162.15
SER:	87.08	NAPHTHYLAMINE:	143.18
THR:	101.1	BENZYLESTER:	90.12
TRP:	186.2	BUTYLESTER:	56.12
TYR:	163.2	ETHYLESTER:	28.06
VAL:	99.13	METHYLESTER:	14.03
SAR:	71.08	SULFUR:	32.06
pGLU:	111.1	SODIUM:	22.99

* Add 18.01 to final peptide formulas to compensate for hydroxyl group and hydrogen

A**ABSOLUTE GRADE REAGENTS see: SPECIAL REAGENT SECTION**

01-9564-04	2-ACETAMIDO-1-AZIDO-1,2-DIDEOXY-α-D-GLUCOPYR. HEMIHYD. m.w. 246	50 & 100 mg
01-0143-04	2-ACETAMIDO-4,6-BENZYLIDENE-2-DEOXY-α-D-GLUCOPYRANOSE m.w. 310	5 & 10 mg
05-6895-02	S-ACETAMIDOMETHYL-CYS^{20,31} EGF^{20,31} (Epidermal Growth Factor Fragment)	1 mg
01-2240-04	α-ACETOCHLORO-D-FRUCTOSE m.w. 366.75	10 & 25 mg
01-8217-04	α-ACETOBROMO-D-GALACTOSE m.w. 411.21	10 & 25 gm
01-8218-04	α-ACETOBROMO-D-GLUCOSE [572-09-8] m.w. 411.21	10 & 25 gm
01-8219-04	α-ACETOCHLORO-D-GALACTOSAMINE mw 365.8	500 mg
01-8220-04	α-ACETOCHLORO-D-GLUCOSAMINE m.w. 365.8	500 mg
01-9800-16	ACETOXY DECANOIC ACID [2478-38-8] m.p. 118-120°C	1 & 10 gm
01-7460-06	ACETOXY METHYLANILIDE NAPHTHOIC ACID m.p. 118-120°C	250 & 500 mg
01-4450-03	N-ACETYL-L-ALA [97-69-8] m.w. 131.13 m.p.120-122°C	500 mg & 1 gm
01-8900-03	N-ACETYL-D-ALA [19436-52-3] m.w. 131.13	5 & 25 gm
01-8510-03	N-ACETYL-DL-ALA [1115-69-1] m.w. 131.13 m.p.130-133°C	10 & 100 gm

01-3415-03	N-ACETYL-L-ALA NH₂ m.w. 145.15	500 mg & 1 gm
01-3416-02	N-ACETYL-L-ALA-L-ALA m.w. 203.16	50 & 100 mg
01-3400-02	N-ACETYL-L-ALA-ALA-ALA [19245-85-3] m.w. 273.28	25 & 50 mg
01-5400-02	N-ACETYL-L-ALA-ALA-ALA-p-NITROANILIDE (Elastase substrate) [2478-38-8] m.p. 118-120°C	25 & 50 mg
01-3417-02	N-ACETYL-L-ALA-ALA-ALA-ALA m.w. 362.38	25 & 50 mg
01-5401-02	N-ACETYL-L-ALA-ALA-PRO-ALA-7-AMIDO-4-METHYLCOUMBARIN (Elastase substrate)	10 & 25 mg
01-4812-03	N-ACETYL-L-ALA-a-NAPHTHYLAMIDE (Chromogenic substrate)	25 & 100 mg
01-7892-02	ACETYL-ALA-ALA-PRO-ALA-b-NAPHTHYLAMIDE (Proteinase yscD substrate)	10 mg
01-7893-02	ACETYL-ALA-ALA-PRO-PHE-p-NITROANILIDE (Proteinase yscD substrate)	10 mg
01-5402-02	N-ACETYL-L-ALA-PRO-ALA-p-NITROANILIDE (Elastase substrate)	10 & 25 mg
01-7451-03	N-ACETYL-DL-ALLYLGLYCINE	1 & 2 gm
01-4451-03	ACETYL-D-AMINOHEPTYLIC ACID m.p. 108°C rot: +8° c=2.50 HAc	50 & 100 mg
01-8511-03	N-ACETYL-L-ARG DIHYDRATE m.w. 251.26 m.p.270°C	5 & 10 gm
01-8085-03	ACETYL-L-ARG METHYLESTER HCl (Trypsin substrate)	100 & 250 mg
01-4813-03	N-a-ACETYL-L-ARG-p-NITROANILIDE (Trypsin / Papain substrate) m.w. 336.8	25 & 100 mg

01-2760-02	ACETYL-ASP(Ba/2)-TYR(SO₃Ba/2)-MET-GLY-TRP-MET NH₂ (Ac, CCK 26-32) m.w. 1058.4	10 & 25 mg
01-0798-02	ACETYL-ASP-TYR(SO₃H)-MET-GLY-TRP-MET-ASP-PHE NH₂ (Ac, Sulfated CCK 26-33) m.w. 1236.5	10 & 25 mg
01-4452-03	N-ACETYL-S-BENZYL-D-CYSTEINE m.w. 253.31	1 & 10 gm
01-8255-03	ACETYL-DL-BUTYRIN	250 & 500 mg
01-7901-25	ACETYLCHOLINE IODIDE 98% [2260-50-6] m.w. 273.12 m.p.162-164°C	25 & 50 gm
01-0013-07	ACETYL COENZYME A , Lithium m.w. 203.16	50 & 100 mg
01-0092-03	N-ACETYL-L-CYSTEINE (Mucolytic agent) [616-91-1] m.w. 163.20	5 & 25 gm
01-9001-17	a-ACETYLDIGOXIN [5511-98-8] m.w. 823.0	25 mg
01-0129-03	N-ACETYL-3,5-DINITRO-L-TYROSINE ETHYLESTER m.w. 313.22	1 & 5 gm
01-8512-03	N-ACETYL-DL-p-FLUOROPHENYLALANINE [17481-06-6] m.w. 213.16 m.p.151-152°C	1 & 10 gm
01-7022-03	N-ACETYL-m-FLUORO-DL-PHENYLALANINE m.w. 225.22 m.p.154-156°C	1 & 10 gm
01-9003-17	ACETYLGITALOXIN	50 mg
01-9004-17	16-ACETYLGITOXIN [7242-07-1] m.w. 822.95	50 mg
01-0093-03	N-ACETYL-L-GLU (GI disorders) [1188-37-0] m.w. 189.17 m.p.196-198°C	5 & 25 gm
01-2904-02	N-ACETYL-D-GLU-g-N-HYDROXSUCCINIMIDE ESTER-a-BENZYLESTER	250 & 500 mg
01-0094-03	N-ACETYL-L-GLN [2490-97-3] m.w. 188.18 m.p.201-203°C	10 & 50 gm

01-4453-03	N-ACETYL GLYCINEAMIDE [2620-63-51] m.w. 116.12	500 mg & 1 gm
01-5403-02	N-ACETYL-GLY-GLY m.w. 175.11	100 & 500 mg
01-3419-02	N-ACETYL-GLY-L-LEU [29852-55-9] m.w. 231.23	25 & 50 mg
01-3420-02	N-ACETYL-GLY-L-LEU NH₂ m.w. 229.28	25 & 50 mg
01-8513-02	a-N-ACETYL-GLY-L-LYS METHYLESTER (Urokinase Substrate) [14752-92-2] m.w. 260.26 m.p.135-136°C	50 & 100 mg
01-8514-03	N-a-ACETYL-L-HISTIDINE .H₂O [39145-52-3] m.w. 215.21 m.p. 169°C	1 & 5 gm
01-8901-03	N-ACETYL-DL-HISTIDINE m.w. 197.19	5 & 25 gm
01-8902-03	N-ACETYL-L-HYDROXYPROLINE m.w. 173.17 [33996-33-7]	5 & 25 gm
01-5404-02	N-ACETYL-5-HYDROXYTRPTOPHAN-5-HYDROXYTRPTOPHAN NH₂ (Serotonin inhibitor)	5 & 10 mg
01-2029-06	3-ACETYL INDOLE [703-80-0] m.w. 159.19	1 & 5 gm
01-8902-02	N-ACETYL-L-ILE [3077-46-1] m.w. 173.21	1 & 5 gm
01-8516-03	N-ACETYL-D-allo-ILE m.w. 173.21 m.p.156°C	1 & 10 gm
01-8517-03	N-ACETYL-DL-LEU [99-15-0] m.w. 173.21 m.p.158-160°C	5 & 25 gm
01-3421-03	N-ACETYL-L-LEU NH₂ m.w. 172.23	500 mg & 1 gm

01-6265-02	ACETYL-L-LEU-LEU-ARG (Sulfated) (Leupeptin)	10 & 25 mg
01-3424-02	N-a-ACETYL-L-LYS [1946-82-3] m.w. 189.18	25 & 50 mg
01-8904-03	N-e-ACETYL-L-LYS [692-04-6] m.w. 188.23 m.p.265°C dec.	1 & 10 gm
01-8905-03	N-e-ACETYL-DL-LYS m.w. 188.23	1 & 10 gm
01-0205-02	N-ACETYL-L-LYS-L-LYS.NH₂ .2 HCl m.w. 388.4	25 & 50 mg
01-4454-03	N-ACETYL-L-MET [65-82-7] m.w. 191.25 m.p.103-106°C	1 & 10 gm
01-8906-03	N-ACETYL-D-MET m.w. 191.25	5 & 25 gm
01-0097-03	N-ACETYL-DL-MET [1115-47-5] m.w. 191.25	5 & 25 gm
01-4455-03	N-ACETYL-L-MET NH₂ m.w. 190.26	250 & 500 mg
01-5909-03	N-ACETYL-L-MET-a-NAPHTHYLESTER (Chromogenic substitute for esterproteases)	10 & 25 mg
01-1428-03	N-ACETYL-DL-MET NH₂ m.w. 190.26	100 & 250 mg
01-5910-02	N-ACETYL-MET-ASP-ARG-VAL-LEU-SER-ARG-TYR acetate (Amino end - tumor virus)	1 mg
01-5912-02	N-ACETYL-MET-ASP-LYS-VAL-LEU-ASN-ARG-TYR (Asn ⁶ Tumor virus)	1 mg
01-0008-04	N-ACETYL MURAMIC ACID [10597-89-4] m.w. 292.19	50 & 250 mg

01-0599-02	N-ACETYL-MURAMYL-L-ALA-D-ISOGLN CHR pure m.w. 492.50 (Adjuvant peptide)	5 & 10 mg
01-0007-04	N-ACETYLNEURAMINIC ACID m.w. 309.27 [131-48-6]	50 & 250 mg
01-4456-03	N-ACETYL-L-ORN [6205-08-9] m.w. 174.20 m.p. 213-215°C	100 & 500 mg
01-4457-03	N-a-ACETYL-D-ORN m.w. 174.20	100 & 500 mg
01-7792-03	ACETYL-L-PHE-p-NITROANILIDE (Chymotrypsin substrate)	100 & 250 mg
01-8519-03	N-ACETYL-D-PHE [10172-89-1] m.w. 207.23 m.p. 172°C	1 & 10 gm
01-3426-03	N-ACETYL-L-PHE NH₂ m.w. 206.24	500 mg & 1 gm
01-1426-03	N-ACETYL-DL-PHE NH₂ m.w. 206.24	100 & 250 mg
01-0132-03	N-ACETYL-DL-PHE-a-NAPHTHYLESTER (Chymotrypsin substrate) [20874-31-1] m.w. 333.37 m.p. 127°C	500 mg & 1 gm
01-8520-03	N-ACETYL-DL-PHE-p-NITROANILIDE m.w. 327.34 m.p. 266-268°C dec.	50 & 100 mg
01-6391-03	N-ACETYL-L-PHE-p-TOLUIDINE	100 & 250 mg
01-5408-02	N-ACETYL-L-PHE-GLY-p-NITROANILIDE (Papain substrate)	10 & 25 mg
01-3427-02	N-ACETYL-L-PHE-PHE [10030-31-6] m.w. 355.34	50 & 100 mg
01-3428-02	N-ACETYL-L-PHE-TRP [19240-41-6] m.w. 394.45	50 & 100 mg

01-0108-02	N-ACETYL-L-PHE-TYR m.w. 371.41	50 & 100 mg
01-0365-07	ACETYLPHOSPHATE , Potassium-lithium salt [94249-01-1] m.w. 184.1	500 mg & 1 gm
01-4458-03	N-ACETYL-L-PRO [68-95-1] m.w. 157.17	50 & 250 mg
01-3429-03	N-ACETYL-L-PRO NH₂ m.w. 156.18	100 & 500 mg
01-8521-03	N-ACETYL-DL-PRO [1074-79-9] m.w. 157.17	1 & 10 gm
01-0169-07	3-ACETILPYRIDINE NAD m.w. 662.5	25 & 100 mg
01-0171-07	3-ACETILPYRIDINE TPN , sodium m.w. 800.4	10 & 25 mg
01-6266-02	ACETYL-SER-TYR-SER-MET-GLU-HIS-PHE-ARG-TRP-GLY- LYS-PRO-VAL NH₂ m.w. 1665 (aMSH Stim. hormone)	1 & 5 mg
01-4815-03	N-ACETYL-L-THREONINE m.w. 161.2	100 & 250 mg
01-8356-02	N-ACETYL-D-TRP-D-TRP m.w. 450.46 HPLC: 98% (Serotonin antagonist)	10 & 25 mg
01-8523-03	N-ACETYL-DL-TRP [87-32-1] m.w. 246.27 m.p. 204-206°C	5 & 25 gm
01-8248-02	ACETYL-L-TRP-L-MET	50 & 100 mg
01-8524-03	N-ACETYL-L-TYR HYDRAZIDE m.w. 237.36 m.p. 241-242°C	1 & 10 gm
01-3432-03	N-ACETYL-L-TYR NH₂ [1948-71-6] m.w. 222.24 m.p. 223-225°C	1 & 10 gm

01-5411-02	N-ACETYL-L-TYR-PHE METHYLESTER m.w. 385.38	50 & 100 mg
01-4459-03	N-ACETYL-L-VAL NH₂ m.w. 158.20	500 mg & 1 gm
01-8907-03	N-ACETYL-D-VAL m.w. 159.28	5 & 25 gm
01-9005-17	ACONITIN, cryst. [302-27-2] m.w. 645.75 m.p. prox. 202°C	100 mg
01-0024-21	ACTINOMYCIN D [50-76-0] m.w. 1255.5 m.p. 251-253°C	5 mg
01-0023-21	ACTINOMYCIN I (S.antiboticus)	1 mg
01-0025-21	ACTINOMYCIN V, Cryst. [18865-48-0]	5 mg
03-0868-06	ACTIVATED CARBON For CHR [7440-44-0] Decolorization of caramel: 80.2%	100 & 500 gm

ACTH

(SER-TYR-SER-MET-GLU-HIS-PHE-ARG-TRP-GLY-LYS-PRO-VAL-GLY-LYS-LYS-ARG- ARG-PRO-VAL-
 LYS-VAL-TYR-PRO-ASN-GLY-ALA-GLU-ASP-GLU-SER-ALA-GLU-ALA-PHE-PRO-LEU-GLU-PHE)

01-5935-02	ACTH (1-39) HUMAN	0.5 mg
	[9002-60-2] m.w. 4541.74	
19-5149-02	ACTH (1-24)	1 mg
	m.w. 2933.39	
01-5939-02	ACTH (1-17)	1 mg
01-5942-02	N-ACETYL ACTH (1-17)	1 mg
01-5940-02	ACTH (1-16)	1 mg
01-5943-02	ACTH (1-14)	1 mg
01-5945-02	N-ACETYL ACTH (1-14)	1 mg
01-5946-02	ACTH (1-13)	1 mg
	m.w. 1624	
01-5948-02	ACTH (1-4)	1 mg
01-5949-02	ACTH (4-11) MET-GLU-HIS-PHE-ARG-TRP-GLY-LYS	1 mg
	m.w. 1090.39	
01-5988-02	Tyr-ACTH (4-10) TYR-MET-GLU-HIS-PHE-ARG-TRP-GLY	1 mg
01-5996-02	ACTH (4-9) MET-GLU-HIS-PHE-ARG-TRP	5 mg
01-5997-02	Tyr-ACTH (4-9) TYR-MET-GLU-HIS-PHE-ARG-TRP	5 mg
07-2166-02	ACTH (5-10) GLU-HIS-PHE-ARG-TRP-GLY	5 mg
01-6202-02	ACTH (7-38) HUMAN	0.5 mg
	m.w. 3659.68	
12-6203-02	ACTH (11-24) LYS-PRO-VAL-GLY-LYS-LYS-ARG-ARG-PRO- VAL-LYS-VAL-TYR-PRO	1 mg
01-6204-02	ACTH (18-39) HUMAN (CLIP)	1 mg
	m.w. 2465.05	
01-2127-02	ACTH (34-39) L-ALA-PHE-PRO-LEU-GLU-PHE	5 mg
	m.w. 722.82	

01-0372-07	ADENINE SULFATE [6509-19-9]	5 & 25 gm
01-3373-07	ADENOSINE-5'-CARBOXYLIC ACID [3415-09-6] m.w. 281.3	25 & 100 mg
01-0373-07	ADENOSINE-2',3'-CYCLIC PHOSPHATE , Cryst. [634-01-5] m.w. 347.2	25 & 100 mg
01-0871-07	ADENOSINE-3',5'-CYCLIC PHOSPHATE .H₂O [60-92-4] m.w. 347.2 (96-100%)	100 & 500 mg
01-0374-07	ADENOSINE-3',5'-CYCLIC PHOSPHATE Sodium [37839-81-9] m.w. 387.2	25 & 100 mg
01-0175-07	ADENOSINE-5'-DIPHOSPHATE Disodium [16178-48-6] m.w. 507.2	250 mg & 1 gm
01-0206-07	ADENOSINE-5'-DIPHOSPHATE Monopotassium Assay: 99.2% ADP	250 & 500 mg
01-3374-07	ADENOSINE-N'-OXIDE m.w. 283.3	500 mg & 1 gm
01-0178-07	ADENOSINE-2'-PHOSPHATE .H₂O [81012-86-4] m.w. 365.2	500 mg & 1 gm
01-0179-07	ADENOSINE-3'-PHOSPHATE .H₂O [84-21-9] m.w. 365.2	500 mg & 1 gm
01-0182-07	ADENOSINE-5'-TRIPHOSPHATE Disodium, cryst. [987-65-5] m.w. 605.2 Purity: 98.7% by HPLC	1 & 10 gm
01-0382-07	ADENYL-(3-5')-ADENOSINE (ApA) sod. salt m.w. 596.45	1 & 5 mg
01-9006-17	AJMALICIN HCL , practical (Raubasine) [4373-34-6] m.w. 388.96	100 mg
01-0083-03	L-ALANINE [56-41-7] m.w. 89.08 m.p. 315-316°C	25 & 50 gm

01-7733-03	L-ALA 7-AMINO-4-METHYLCOUMARIN (Aminopeptidase M substrate)	10 & 25 mg
01-4462-03	L-ALA-t-BUTYLESTER HCl m.w. 181.66 m.p. 170-175°C dec.	1 & 5 gm
01-0105-03	L-ALA-b-NAPHTHYLAMIDE m.w. 250.73 m.p. 205-206°C	100 & 500 mg
01-0087-03	D-ALANINE [338-69-2] m.w. 89.08 m.p. 291-293°C	1 & 10 gm
01-4461-03	D-ALA BENZYLESTER-p-TOSYLATE [41036-32-2] m.w. 331.41	500 mg & 1 gm
01-8545-03	D-ALA METHYLESTER HCl m.w. 139.58	1 & 10 gm
01-4460-03	DL-ALANINEAMIDE HBR m.w. 169.02	500 mg & 1 gm
01-0945-03	dL-ALA ETHYLESTER HCl [617-27-6] m.w. 153.61 m.p. 85-87°C	1 & 10 gm
01-9879-03	L-ALA-4-METHOXY-b-NAPHTHYLAMIDE HCl (Fluorogenic substrate for Aminopeptidase M) [3438-14-0]	100 & 250 mg
01-8527-02	b-ALA-b-ALA [2140-53-6] m.w. 160.17	100 & 500 mg
01-5415-02	b-ALA-b-ALA-b-ALA m.w. 231.25	50 & 100 mg
01-8528-02	b-ALA-L-ALA [34322-87-7] m.w. 160.19	100 & 500 mg
01-8529-02	L-ALA-b-ALA [52788-02-1] m.w. 160.17	100 & 500 mg
01-3434-02	D-ALA-D-ALA [923-16-0] m.w. 160.17	100 & 250 mg

01-3438-02	L-ALA-ALA-ALA (Tri-Ala) m.w. 231.25	50 & 100 mg
01-3439-02	L-ALA-ALA-ALA-ALA (Tetra-Ala) [926-79-4] m.w. 302.33	50 & 100 mg
01-3440-02	L-ALA-ALA-ALA-ALA-ALA (Penta-Ala) m.w. 373.41	50 & 100 mg
01-7654-02	L-ALA-ALA-ALA-ALA-ALA-ALA-ALA-ALA-ALA (Octa-Ala) m.w. 586.7 Sol: Aque. amm./H ₂ O	10 & 25 mg
01-7656-02	L-ALA-ALA-ALA-ALA-ALA-ALA-ALA-ALA-ALA-ALA-ALA (Deca-Ala) m.w. 728.86	50 & 100 mg
01-5413-02	L-ALA-D-ALA-L-ALA m.w. 231.25	50 & 100 mg
01-3390-02	D-ALA-ALA-ALA m.w. 231.25	50 & 100 mg
01-5416-02	D-ALA-ALA-ALA-ALA m.w. 302.33	50 & 100 mg
01-5417-02	D-ALA-ALA-ALA-ALA-ALA m.w. 373.41	50 & 100 mg
01-5418-02	L-ALA-ALA-ALA-ALA-L-GLU m.w. 431.44	25 & 50 mg
01-5419-02	L-ALA-ALA-ALA-ALA-L-GLU-GLU-GLU m.w. 689.66	25 & 50 mg
01-5420-02	L-ALA-ALA-ALA-ALA-L-TYR-L-ALA m.w. 536.58	25 & 50 mg
01-0943-02	L-ALA-ALA-ALA-METHYLESTER ACETATE	25 & 50 mg
01-5421-02	L-ALA-ALA-ALA-L-PRO m.w. 328.36	10 & 25 mg
01-5422-02	L-ALA-ALA-ALA-L-PRO-L-ALA m.w. 399.44	10 & 25 mg

01-5425-02	L-ALA-ALA-ALA-L-PRO-L-ALA-ALA m.w. 470.52	10 & 25 mg
01-5423-02	L-ALA-ALA-ALA-L-TYR m.w. 394.42	10 & 25 mg
01-5424-02	L-ALA-ALA-ALA-L-TYR-L-ALA m.w. 465.50	10 & 25 mg
01-5426-02	L-ALA-ALA-ALA-L-PRO-L-TYR-L-ALA m.w. 562.61	10 & 25 mg
01-5427-02	L-ALA-ALA-ALA-L-TYR-L-ALA-ALA-ALA m.w. 562.61	10 & 25 mg
01-0940-02	D-ALA²-LEU⁵-ENKEPHALIN m.w. 569	1 & 2 mg
01-0941-02	D-ALA²-LEU⁵-ENKEPHALINAMIDE m.w. 567	1 & 2 mg
01-7884-02	D-ALA-LEU-LYS-7-AMINO-4-METHYLCOUMARIN (Plasmin substrate)	10 mg
01-0942-02	D-ALA²-MET-ENKEPHALINAMIDE m.w. 587	5 & 10 mg
01-5429-02	L-ALA-ALA-L-PHE-α-NAPHTHYLAMIDE (Chymotrypsin substrate) m.w. 450.52	25 & 50 mg
01-5430-02	L-ALA-ALA-L-PRO m.w. 257.28	25 & 50 mg
01-5432-02	L-ALA-ALA-L-TYR-L-ALA m.w. 394.42	25 & 50 mg
01-3442-02	L-ALA-L-ARG .CH₃COOH m.w. 305.33	50 & 100 mg

06-7117-02	ALA-ASP-SER-GLY-GLU-GLY-ASP-PHE-LEU-ALA-GLU-GLY-GLY-VAL-ARG (Fibrinopeptide A) (Human)	1 mg
01-5434-02	ALA-GLU-LYS-LYS-ASP-GLU-GLY-PRO-TYR-ARG-MET-GLU-HIS-PHE-ARG-TRP-GLY-SER-PRO-PRO-LYS-ASP (b-MSH Human) m.w. 2660.89	1 mg
01-6286-02	ALA-GLY-CYS-LYS-ASN-PHE-PHE-TRP-LYS-THR-PHE-THR-SER-CYS (Somatostatin 14)	1 & 5 mg
01-5436-02	ALA-GLY-CYS-LYS-ASN-PHE-PHE-TYR-LYS-THR-TYR-THR-SER-CYS (Tyr ¹¹ Somatostatin)	1 mg
01-7016-02	L-ALA-GLY-SER-GLU (Eosinophilactic tetrapeptide)	25 & 50 mg
01-0852-02	b-ALA-L-HIS (L-Carnosine) [305-84-0] m.w. 226.23 m.p. 246-250°C	500 mg & 1 gm
01-4040-02	L-ALA-D-ISOGLN (Muramyl dipeptide fragment) m.w. 217.2	25 & 50 mg
01-7865-09	L-ALA-L-ISOGLN m.w. 217.2	25 & 50 mg
01-0789-02	D-ALA-D-LEU m.w. 202.25	25 & 50 mg
01-0119-02	DL-ALA-DL-LEU [1999-42-4] m.w. 202.25	250 & 500 mg
01-8543-02	DL-ALA-DL-LEU-GLY m.w. 259.30	100 & 250 mg
01-5438-02	L-ALA-LEU-ALA-GLY m.w. 330.39	50 & 100 mg
01-7736-03	L-ALA-4-METHOXY-b-NAPHTHYLAMIDE HCl (Aminopeptidase M substrate) m.w. 217.22	10 & 25 mg

01-8548-02	b-ALA-1-METHYLHIS NITRATE SALT (L-Anserine Nitrate) m.w. 303.30	50 & 100 mg
01-4465-02	DL-ALA-L-NLE m.w. 202.25	500 mg & 1 gm
01-8552-02	b-ALA-DL-PHE m.w. 236.27	1 & 5 gm
01-0121-02	L-ALA-PHE [3061-90-3] m.w. 236.27	100 & 250 mg
01-7885-02	L-ALA-PHE-LYS-7-AMID-4-METHYLCOUMARIN salt (Plasmin substrate)	10 mg
01-2127-02	L-ALA-PHE-PRO-LEU-GLU-PHE (ACTH 34-39) m.w. 722.82	5 mg
01-3453-02	L-ALA-PRO.H₂O [13485-59-1] m.w. 204.23	100 & 250 mg
01-7851-02	L-ALA-PRO-p-NITROANILIDE HCl (Dipeptidylaminopeptidase IV)	25 & 50 mg
01-5958-02	L-ALA-PRO-ALA	25 & 50 mg
01-5959-02	L-ALA-PRO-ARG-GLY-ASP	10 & 25 mg
01-5960-02	L-ALA-PRO-GLY-PRO-ARG salt (Human Procolipase activation peptide)	1 & 2.5 mg
01-5439-02	L-ALA-PRO-TYR-ALA m.w. 420.45	25 & 50 mg
01-0123-02	DL-ALA-DL-SER m.w. 176.17	250 & 500 mg
01-5440-02	L-ALA-SER-GLY m.w. 233.22	50 & 100 mg
16-7591-02	ALA-SER-THR-THR-THR-ASN-TYR-THR (Peptide T)	1 mg

16-7592-02	D-ALA-SER-THR-THR-THR-ASN-TYR-THR-NH₂ (D-Ala ¹) Peptide T amide)	1 mg
01-3455-02	L-ALA-TRP [16305-75-2] m.w. 275.31	50 & 100 mg
01-8555-02	b-ALA-L-TYR [21612-26-0] m.w. 252.27	100 & 250 mg
01-3456-02	L-ALA-TYR [3061-88-9] m.w. 252.27	50 & 100 mg
01-0799-02	ALA-TYR-GLY-TRP-MET-ASP-PHE NH₂ (Desulfated G11-17) m.w. 856.0	5 & 10 mg
01-0797-02	ALA-TYR(SO₃H)-GLY-TRP-MET-ASP-PHE NH₂ (Sulfated G11-17) m.w. 985.1	5 & 10 mg
01-4912-02	L-ALA-TYR(SO₃H)-MET-GLY-TRP-MET-ASP-PHE NH₂ (Ala ¹ -CCK 27-33 desulfated) m.w. 1116.3	10 & 25 mg
01-5441-02	L-ALA-TYR-ALA m.w. 323.34	50 & 100 mg
01-0954-02	L-ALA-VAL [3303-45-5] m.w. 170.21	100 & 250 mg
01-9100-02	ALA-VAL-GLY-HIS-LEU-MET-NH₂ (Bombesin 9-14) m.w. 624.76	10 mg
01-5442-02	L-ALA-VAL-LEU m.w. 301.39	50 & 100 mg
01-2421-06	ALIZARINE RED S (Alizarine Sodium Sulfonate) [130-22-3]	5 gm
01-0193-06	a-ALUMINA Monohydrate Alumina: 75% BaI:H₂O	1 & 10 kg
Amino Acetic Acid see: Glycine		
01-0102-03	DL-b-AMINO ADIPIC ACID m.w. 161.16 m.p. 196-198°C	1 & 10 gm
01-0333-06	p-AMINO BENZAMIDINE DIHCL	1 & 5 gm

[2498-50-2]

01-7902-25	p-AMINOBENZOIC ACID 99% (PABA) [150-13-0] m.w. 137.14 m.p. 188-189°C	10 & 50 gm
01-7874-02	2-AMINOBENZOYL-ALA-ARG-VAL-NLE-p-NITRO-PHE- GLU-ALA-NLE-NH₂ (HIV Protease substrate)	1 mg
01-7875-02	2-AMINOBENZOYL-ARG-VAL-NLE-p-NITRO-PHE-GLU-ALA-NLE-NH₂ (HIV Protease substrate)	1 mg
01-4833-06	p-AMINOBENZYL CELLULOSE [9032-51-3]	500 mg & 1 gm
01-3459-03	D-a-AMINO-N-BUTYRIC ACID [2623-91-8] m.w. 103.12 m.p. 200°C Dec.	100 & 500 mg
01-0089-03	DL-a-AMINO-N-BUTYRIC ACID [2835-81-6] m.w. 103.12	5 & 25 gm
01-8561-03	DL-b-AMINOBUTYRIC ACID [2835-82-7] m.w. 103.12	1 & 10 gm
01-8563-03	g-AMINOBUTYRYL-L-LEUCINE HBR m.w. 297.19	1 & 5 gm
01-4466-03	D-a-AMINOCAPRYLIC ACID m.w. 159.23	100 & 500 mg
01-8564-03	DL-a-AMINOCAPRYLIC ACID [2187-07-7] m.w. 159.23 m.p. 270°C	1 & 10 gm
01-7456-03	o-AMINO HEPTANOIC ACID (7-Aminoheptanoic acid) [929-17-9] m.w. 145.21 CHR pure	500 mg & 1 gm
p-AMINO HIPPURIC ACID see: p-AMINOBENZOYL GLYCINE		
L-2-AMINO-4-HYDROXYBUTYRIC ACID see: L-HOMOSERINE		
DL-2-AMINO-4-HYDROXYBUTYRIC ACID see: DL-HOMOSERINE		
01-8566-03	d-AMINOLEVULINIC ACID HCL [5451-09-2] m.w. 167.59 m.p. 156-158°C	100 & 500 mg
01-8000-06	p-AMINOMETHYLBENZENE SULFONAMIDE HCl	10 & 25 gm

01-7434-06	4-AMINO-2-NITROBENZOIC ACID CHR Pure (99%) [619-17-0] m.w. 182.1 C:46.08 H:3.29 N:15.32	1 & 5 gm
01-4468-03	D-a-AMINO NONYLIC ACID	100 & 500 mg
01-4469-06	6-AMINO PENICILLINIC ACID [551-16-6]	10 & 50 gm
01-0956-03	p-AMINO-L-PHENYLALANINE HCL.H₂O [943-80-6]	100 & 250 mg
01-8253-06	2-AMINO-3-NITROBENZOIC ACID	50 & 100 mg
 b-AMINOPROPIONIC ACID see: b-ALANINE		
01-8568-03	3-AMINO-L-TYROSINE DIHCL [28279-22-3] m.w. 269.15	1 & 10 gm
01-8570-03	5-AMINOVALERIC ACID [660-88-8] m.w. 117.15 m.p. 158-161°C	1 & 10 gm
01-2310-10	AMMONIUM ACETATE , Absolute grade m.w. 77.08	500 gm & 1 kg
01-6146-21	AMPHOTERCIN B [1397-89-3] m.w. 924.1 m.p. 170°C dec.	250 mg & 1 gm
01-0355-21	AMPHOTERICIN B , Soluble (prox. 45% active material by wt.) [1397-89-3]	50 mg
01-8226-04	AMYLOSE (Potato) [9005-82-7]	5 gm
01-6649-17	DL-ANABASIN [13078-04-1] m.w. 162.24 B.P. 136-138°C	100 mg
01-6620-17	ANDROGRAPHOLIDE (Lactone from A.paniculata) (Bicyclic diterpenoid lactone) [5508-58-7] m.w. 350.44	100 & 250 mg

ANGIOTENSIN, Fragments and Analogs

01-3766-02	ANGIOTENSIN I, Ile⁵ , Human (L-Asp-Arg-Val-Tyr-Ile-His-Pro-Phe-His-Leu) m.w. 1297	5 mg
01-6206-02	N-ACETYL ANGIOTENSIN I	1 mg
01-6208-02	ANGIOTENSIN I (Asn ¹ , Val ⁵ , Asn ⁹) (Asn-Arg-Val-Tyr-Val-His-Pro-Phe-Asn-Leu) (Salmon)	1 mg
01-6209-02	ANGIOTENSIN I (Bullfrog) (Val ⁵ , Asn ⁸) (Asn-Arg-Val-Tyr-Val-His-Pro-Phe-Asn-Leu) m.w. 1259.9	1 mg
01-6210-02	ANGIOTENSIN I (Des Asp ¹) (Arg-Val-Tyr-Ile-His-Pro-Phe-His-Leu)	5 mg
01-3765-02	Angiotensin II , Human (L-Asp-Aarg-Val-Tyr-Ile-His-Pro-Phe) m.w. 1046	5 mg
01-6211-02	(Asn¹, VAL⁵) Angiotensin II (L-Aan-Arg-Val-Tyr-Val-His-Pro-Phe) m.w. 1031.1	5 mg
19-6212-02	(Sar¹, Phe⁸) Angiotensin II (Sar-Arg-Val-Tyr-Ile-His-Pro-Phe)	5 mg
19-6916-02	(Sar¹, Ile⁸) Angiotensin II (Sar-Arg-Val-Tyr-Ile-His-Pro-Ile) m.w. 968.17	5 mg
19-6915-02	(Sar¹, Leu⁸) Angiotensin II (Sar-Arg-Val-Tyr-Ile-His-Pro-Leu) m.w. 968.17	5 mg
19-6222-02	(Sar¹, Thr⁸) Angiotensin II (Sar-Arg-Val-Tyr-Ile-His-Pro-Thr)	5 mg
19-9448-02	(Val⁵) ANGIOTENSIN II (Asp-Arg-Val-Tyr-Val-His-Pro-Phe) m.w. 1032.2	5 mg

ANTI-COAGULANT ENZYME

PROPERTIES

The anticoagulant protein is a thrombin-like enzyme from *Crotalus admanteus*, which induces the conversion of fibrinogen to fibrin in the presence or absence of all other clotting factors, Calcium (Factor IV) is not necessary for its activity and does not enhance or inhibit its clotting ability. The fibrin produced is abnormal in structure forming microclots which are apparently removed by phagocytic activity of the reticulo-endothelial system. In vivo, the anticoagulant activity is due to a hypofibrinogenimic state which is dose-dependent and which occurs shortly (within 50 min.) after intravenous administration. The hypofibrinogenimic state appears to be maintained for at least eight hours, sometimes up to 24 hours depending upon the dose employed.

MODE OF ACTION: The anti-coagulant enzyme converts fibrinogen to fibrin microclots, producing a temporary hypofibrinogenimic state.

ANALYTICAL DATA:

Protein conc: 0.594 mg./mg powder

Protease activity: 57.1 Kunits u/mg.

Powder BAEE hydrolase: 1.79 moles/min./mg.

Clotting activity: 1 mg. powder has an approx. activity of 3 NIH Thrombin units

Homogeneity: Homogeneous by gel electrophoresis - contains a small percentage of dimer aggregate.

Solubility: Distilled water or saline solutions are suggested.

REF:

Bonilla, C.A. and McCarter, D.J., *Circulation, Suppl.*, Oct. 1973.

04-1450-18 **ANTI-COAGULANT ENZYME**

1 & 5 mg

(Asn-Arg-Val-Tyr-Val-His-Pro-Phe-Asn-Leu)

01-8228-04	1,6-ANHYDROGLUCOSE triacetate m.w. 288.26	500 mg & 1 gm
01-8548-02	L-ANSERINE NITRATE m.w. 303.30	50 & 100 mg
01-2816-17	APIGENIN-7-GLUCOSIDE m.w. 432.57 m.p. 198-201°C	10 mg

APROTININ see: **TRASYLOL**

01-0154-04	L-ARABINOSE [87-72-9] m.w. 150.13	10 gm
01-0155-04	D-ARABINOSE [28697-53-2] m.w. 150.13	10 & 50 gm
01-0156-04	L-ARABINITOL (Arabitol) m.w. 152.15	1 & 10 gm
01-0157-04	D-ARABINITOL m.w. 152.15	1 & 10 gm
01-7904-25	D-ARABOASCORBIC ACID (Isoascorbic acid) m.w. 176.13 m.p. 169-172°C	25 & 100 gm
01-2130-17	ARBUTIN m.w. 272.25	5 & 25 gm
01-0291-18	L-ARGINASE (calf liver) [9000-96-8] EC 3.5.3.1 Act: 70 U./mg. enzyme protein	30 mg
01-0084-03	L-ARGININE BASE (Heptatic/Hyperammonemia research) [74-79-3] m.w. 174.20	25 & 100 gm
01-0085-03	L-ARGININE MONOHYDROCHLORIDE [1119-34-2] m.w. 210.67	25 & 100 gm

01-8574-03	D-ARGININE HCL [627-75-8] m.w. 210.67	100 & 500 mg
01-0090-03	DL-ARGININE MONOHYDROCHLORIDE [32042-43-6] m.w. 210.67	1 & 10 gm
01-5444-02	L-ARG-7-AMIDO-4-METHYLCOUMARIN HCL (Fluorogenic subs. for trypsin/papain/cathepsin H)/Aminopeptidase B) m.w. 367.8	10 & 25 mg
01-3730-02	L-ARG-ARG .2HCL m.w. 366.85 C: 35.54 H: 7.23 N: 26.88	50 & 100 mg
01-5962-02	L-ARG-ARG-7-AMIDO-4-METHYLCOUMARIN .3HCl minopeptidase III substrate)	10 mg
01-5961-02	L-ARG-ARG-b-NAPHTHYLAMIDE .3 HCl (Substrate for dipeptide aminopeptidase III)	10 & 25 mg
01-3731-02	L-ARG-ARG-ARG .3HCL m.w. 523.04 C: 35.83 H: 7.18 N: 27.68	50 & 100 mg
01-7898-02	ARG-ARG-LEU-ILE-GLU-ASP-ALA-GLU-TYR-ALA-ALA-ARG-GLY (Protein Tyrosine kinase substrate)	1 mg
01-7743-02	ARG-ARG-LEU-SER-SER-LEU-ARG-ALA (cAMP dependent protein kinase substrate)	1 mg
01-5445-03	L-ARG-ARG-LYS-ARG-SER-GLY-PRO m.w. 770.88	2.5 & 5.0 mg
01-3460-02	L-ARG-ASP m.w. 289.30	50 & 100 mg
01-2710-02	ARG-ASP-TYR(SO₃H)-THR-GLY-TRP-NLE-ASP-PHE NH₂ (Nona CCK-Thr ²⁸ Nle ³¹) m.w. 1251.37	1 & 5 mg
01-4470-03	L-ARG BENZYLESTER-p-TOSYLATE	500 mg & 1 gm
01-6034-02	L-ARG-GLY-ASP (Fibronectin fragment)	1 & 5 mg

01-6035-02	L-ARG-GLY-ASP-SER (Fibronectin fragment)	1 & 5 mg
19-5446-02	ARG-GLY-PRO-PHE-PRO-ILE (a-Substance 1B)	1 mg
01-3732-02	L-ARG-ILE.CH₃COOH m.w. 347.42	50 & 100 mg
01-3733-02	L-ARG-LEU.CH₃COOH m.w. 347.42	50 & 100 mg
01-0101-03	L-ARGININE METHYLESTER DIHCL [26340-89-6] m.w. 261.15 m.p. 190°C dec.	1 & 5 mg
02-6241-02	ARG-PRO-GLY-PHE-SER-PRO-PHE-ARG ((Des Pro ²) Bradykinin) m.w. 963.11	5 mg
02-6234-02	ARG-PRO-HYP-GLY-PHE-SER-PRO-PHE-ARG ((Hyp ³) Bradykinin)	1 mg
19-7666-02	ARG-PRO-LYS-PRO (Substance (1-4))	1 mg
19-7667-02	ARG-PRO-LYS-PRO-GLN-GLN-PHE-PHE-GLY (Substance P (1-9))	1 mg
01-4200-02	H₂N-ARG-PRO-LYS-PRO-GLN-GLN-PHE-PHE-GLY-LEU-MET (Substance P Bovine) m.w. 1347.0	1 mg
01-6268-02	ARG-PRO-LYS-PRO-GLN-GLN-PHE-TYR-GLY-LEU-MET-NH₂ ((Tyr ⁶) Substance P) [55614-10-3]	1 mg
19-7665-02	ARG-PRO-LYS-PRO-GLN-GLN-PHE-PHE-GLY-LEU-NLE-NH₂ ((Nle ¹¹) Substance P)	1 mg
01-5448-02	ARG-PRO-PRO acetate (Bradykinin 1-3) m.w. 428.47	10 mg
01-5449-02	L-ARG-PRO-PRO-GLY-PHE acetate (Bradykinin 1-5)	5 mg

02-6231-02	ARG-PRO-PRO-GLY-PHE-SER acetate (Bradykinin 1-6)	5 mg
02-6232-02	ARG-PRO-PRO-GLY-PHE-SER-PRO acetate (Bradykinin 1-7)	5 mg
01-3764-02	ARG-PRO-PRO-GLY-PHE-SER-PRO-PHE-ARG acetate (Bradykinn triacetate) [5979-11-3] m.w. 1060.2	5 mg
02-6235-02	ARG-PRO-PRO-GLY-PHE-SER-PRO-TYR-ARG (TYR⁸) (Bradykinin) m.w. 1076.2	1 mg
01-8002-03	L-ARG-PYRROLIDONE CARBOXYLATE	100 & 250 mg
01-5963-02	L-ARG-SER-ARG acetate	2.5 & 5.0 mg
01-5964-02	L-ARG-TRP salt	25 & 50 mg
01-3771-02	L-ARG-TYR.CH₃COOH m.w. 397.41	50 & 100 mg
01-6639-02	ARG-TYR-LEU-GLY-TYR-LEU-OH (a-Casein 90-95)	2.5 & 5.0 mg
01-6640-02	ARG-TYR-LEU-GLY-TYR-LEU-GLU-OH (a-Casein 90-96)	2.5 & 5.0 mg
01-5450-02	L-ARG-TYR-LEU-PRO-THR (Proctolin) m.w. 648.75	5 & 10 mg
01-7876-02	ARG-VAL-NLE-p-NITRO-PHE-GLU-ALA-NLE-NH₂ (HIV Protease substrate)	1 mg
01-4472-02	L-ARG-VAL-TYR-ILE-HIS-PRO-ILE ((Des-Asp ¹ , Ile ⁵) Angiotensin II)	5 mg
01-6225-02	ARG-VAL-TYR-ILE-HIS-PRO-PHE (Angiotensin III Human) [12687-51-3] m.w. 931.2	5 mg
01-6210-02	ARG-VAL-TYR-ILE-HIS-PRO-PHE-HIS-LEU (Des Asp ¹) Angiotensin I	5 mg

01-6225-02	L-ARG-VAL-TYR-VAL-HIS-PRO-PHE (Val ⁴) Angiotensin III) m.w. 917.1	5 mg
01-2133-02	ARG⁸ VASOTOCIN	1 mg
01-9424-17	a-ASARONE (Phenol derivative) checked by GC [2883-98-9]	100 mg
01-9425-17	b-ASARONE (Phenol derivative) checked by GC [5273-869]	100 mg
01-7905-25	L(+) ASCORBIC ACID (Vitamin C) [50-81-7] m.w. 176.13 m.p. 193°C	50 & 100 gm
01-7907-25	L(+) ACORBIC ACID Sodium Salt m.w. 198.11	100 & 500 gm
01-7908-25	ASCORBYL PALMITATE [1330-84-3] m.w. 414.54 m.p. 113-114°C	10 & 50 gm
01-8578-03	D-ASPARAGINE MONOHYDRATE [2058-58-4] m.w. 150.10	25 & 50 mg
01-8579-03	DL-ASPARAGINE MONOHYDRATE m.w. 150.10 m.p. 220°C [3130-87-8]	1 & 10 gm
01-4474-03	L-ASPARAGINE ANHYDROUS m.w. 132.12	1 & 10 gm
01-8580-03	L-ASPARAGINE MONOHYDRATE Cryst. (Brain/Nervous research) m.w. 150.14 m.p. 234-235°C	25 & 100 gm
01-5965-02	ASN-ALA-GLY-ALA (b-Lipoprotein sequence)	5 & 10 mg
01-6211-02	L-ASN-ARG-VAL-TYR-VAL-HIS-PRO-PHE ((Asn ¹ , VAL ⁵) Angiotensin II) m.w. 1031.1	5 mg
01-6208-02	ASN-ARG-VAL-TYR-VAL-HIS-PRO-PHE-ASN-LEU (Salmon) ((Asn ¹ , Val ⁵ , Asn ⁹) Angiotensin I) m.w. 1258.5	1 mg

01-6207-02	L-ASN-ARG-VAL-TYR-VAL-HIS-PRO-PHE-HIS-LEU ((Asn ¹ , Val ⁵) (Angiotensin I) (Goosefish)	1 mg
03-6867-02	(ASN-PRO-ASN-ALA)₂ (Circumsporozoite Protein repetitive sequence)	1 mg
03-6868-02	(ASN-PRO-ASN-ALA)₃ (Circumsporozoite Protein repetitive sequence)	1 mg
01-7464-03	L-ASPARAGYL-b-NAPHTHYLAMIDE	100 & 500 mg
01-4475-03	D-ASPARTIC ACID [1783-96-6] m.w. 133.11	10 & 50 gm
01-0079-03	L-ASPARTIC ACID MONOPOTASSIUM SALT [1115-63-5] m.w. 171.19	50 & 250 gm
01-4363-02	L-ASP-L-ARG m.w. 289.3 C: 40.86 H: 6.50 N: 23.69	25 & 50 mg
01-6224-02	L-ASP-ARG-VAL-TYR-ILE-HIS-PRO ((Des-Phe ⁸) Angiotensin II)	5 mg
01-3765-02	L-ASP-ARG-VAL-TYR-ILE-HIS-PRO-PHE (Angiotensin II, Human) m.w. 1046	5 mg
01-3766-02	L-ASP-ARG-VAL-TYR-ILE-HIS-PRO-PHE-HIS-LEU (Angiotensin I, Ile ⁵ , Human) m.w. 1297	5 mg
01-2335-02	ASP-ARG-VAL-TYR-ILE-HIS-PRO-PHE-HIS-LEU-VAL-ILE-HIS-ASN-OH (Human Preangiotensinogen 1-14)	1 mg
01-6267-02	H-ASP-ARG-VAL-TYR-ILE-HIS-PRO-PHE-HIS-LEU-LEU-VAL-TYR-SER-OH (Horse) (Renin substrate) [64315-16-8] m.w. 1759	1 & 2 mg
01-6213-02	L-ASP-ARG-VAL-TYR-VAL-HIS-PRO-PHE ((Val ⁵) Angiotensin II)	5 mg
01-5433-02	ASP-GLU-GLY-PRO-TYR-LYS-MET-GLU-HIS-PHE-ARG-TYR-GLY-SER-PRO-PRO-LYS-ASP (b-MSH, Pig) m.w. 2153.3	1 & 2 mg

01-0126-02	b-L-ASP-GLY [3790-52-1] m.w. 190.16	100 & 250 mg
01-5966-02	L-ASP-L-LYS	25 & 50 mg
01-5967-02	L-ASP-L-e-LYSINE	25 & 50 mg
01-2336-02	ASP-MET-HIS-PHE-PHE-VAL-GLY-LEU-MET NH₂ NEUROKININ B (Neurokinin K)	1 & 5 mg
01-8582-03	L-ASPARTIC-b-METHYLESTER m.w. 147.14	1 & 10 gm
01-6304-02	b-L-ASP-PHE m.w. 280.3 C:55.52 H:5.76 N:9.86	50 & 100 mg
01-6305-02	b-L-ASP-PHE METHYLESTER m.w. 294.3 C:56.85 H:6.14 N:9.48	50 & 100 mg
01-0962-02	L-ASP-PHE METHYLESTER [22839-47-0] m.w. 294.31 (Sweetener dipeptide)	100 & 250 mg
01-3469-02	a-L-ASP-PRO amorphous powder m.w. 230.22	25 & 50 mg
01-7689-02	Asp-Tyr CHOLECYSTOKININ 26-27 desulfated m.w. 296.28	50 & 100 mg
01-7690-02	Asp-Tyr-Met CHOLECYSTOKININ 26-28 desulfated m.w. 427.47	10 & 25 mg
01-8268-02	ASP-TYR(SO₃H)-MET.NH₃ (CCK 26-28 sulfated) m.w. 524.6 C:34.22 H:3.81 N:6.35 S:8.55 Sol: DMSO	10 & 25 mg
01-0323-02	ASP-TYR-MET-GLY-TRP-MET-ASP-PHE NH₂ (desulfated CCK-8) (26-33) m.w. 1063.17	10 & 25 mg
01-0340-02	ASP-TYR(SO₃H)-MET-GLY-TRP-MET-ASP-PHE NH₂.2NH₃ (sulfated CCK-8) (26-33) m.w. 1177.4	1, 5 & 10 mg
01-0341-02	ASP-TYR(SO₃H)-MET-GLY-TRP-MET-ASP-PHE-OH .2-3 NH₃ (sulfated CCK-8, deaminated) m.w. 1144.3 (w/o NH ₂)	1 & 5 mg

01-2718-02	ASP-TYR(SO₃H)-THR-GLY-TRP-NLE-ASP-PHE-NH₂.NH₃ (sulfated Nona CCK 26-33) m.w. 1129.2	1 & 5 mg
01-2719-02	ASP-TYR-THR-GLY-TRP-NLE-ASP-PHE-NH₂ (desulfated Nona CCK 26-33) m.w. 1015.15	1 & 5 mg
01-5968-02	L-ASP-L-VAL	25 & 50 mg
01-3853-17	AUCUBIN (Iridoid) m.w. 346.33 (Checked by HPLC)	5 mg
01-4147-06	p-AZIDOBENZOIC ACID [6427-66-3] m.w. 163.14	1 gm
01-7037-06	AZULEN 99% [275-51-41] m.p. 99-100°C	100 mg & 1 gm

B

02-6148-21	BACITRACIN [1405-87-4] 50,000 u./gm.	5 gm
02-1824-02	BACTENECIN (Arg-Leu-Cys-Arg-Ile-Val-Val-Ile-Arg-Val-Cys-Arg)	0.5 mg
02-1823-02	a-BAG CELL PEPTIDE (1-9) (Ala-Pro-Arg-Leu--Arg-Phe-Tyr-Ser-Leu)	1 mg
02-1222-06	BENZAMIDINE HCL HYDRATE [1670-14-0] m.w. 156.61 m.p.73°C	5 & 25 gm
02-0611-03	N-BENZOYL-L-ARG AMIDE HCL.H₂O (BAA) m.w. 331.81 m.p.127-131°C	1 & 10 gm
02-0612-03	N-BENZOYL-L-ARG METHYLESTER HCL (BAME) [1784-04-9] m.w. 328.80	1 & 10 gm
02-6964-02	N-a-BENZOYL-L-ARG-GLY-LEU-4-METHOXY-b-NAPHTHYLAMIDE HCl (Cathepsin B substrate)	10 & 25 mg
02-8086-03	BENZOYL-DL-ARG-7-AMIDO-4-METHYLCOUMARIN HCl (Trypsin substrate)	10 & 25 mg
07-7760-02	BENZOYL-ARG-GLY-PHE-PHE-LEU-4-METHOXY-b-NAPHTHYLAMIDE HCl (Cathepsin D substrate)	10 mg
07-7761-02	BENZOYL-ARG-GLY-PHE-PHE-PRO-4-METHOXY-b-NAPHTHYLAMIDE HCl (Cathepsin D substrate)	10 mg
07-7909-25	BENZOYLCHOLINE IODIDE [17518-43-3] m.p.244-245°C	1 & 10 gm
07-8584-03	N-BENZOYL-L-CYSTINE m.w. 448.49 m.p.180-181°C	1 & 10 gm

07-0614-03	N-BENZOYLGLYCINE	100 & 500 mg
	m.p.188-191°C	
07-0616-03	N-BENZOYLGLYCINE METHYLESTER	1 & 10 gm
08-2924-02	BENZOYL-GLY-GLY HIPPURYL-GLY	1 & 10 gm
	[1145-32-0] m.w. 237.21 m.p. 204-208°C; 210-212°C	
08-3000-02	BENZOYL-GLY-L-HIS-LEU HIPPURYL-HIS-LEU monohydrate	25 & 50 mg
	m.w. 448.45 (subst. for Angiotensin I Convvtg enzy.)	
08-2925-02	BENZOYL-GLY-L-LEU NH₂ HIPPURYL-L-LEU NH₂	25 & 50 mg
	m.w. 291.32 C:61.64 H:7.38 N:14.24	
08-3472-02	BENZOYL-GLY-L-LEU	25 & 50 mg
	(Hipp-L-Lys) [740-63-6] m.w. 290.25	
08-2927-02	BENZOYL-GLY-L-PHE	25 & 50 mg
	(Hipp-L-Phe) [744-59-2] m.w. 326.35	
02-8910-03	N-e-BENZOYL-L-LYS	1 & 10 gm
	m.w. 250.30	
02-8591-02	N-BENZOYL-L-MET NH₂	250 & 500 mg
02-0617-03	N-BENZOYL-DL-PHE	5 & 25 gm
	[2901-76-0] m.w. 269.30 m.p.187-188°C	
02-7739-02	N-BENZOYL-PHE-ALA-PRO	10 mg
	(Angiotensin I converting enzyme substrate)	
02-3406-03	N-BENZOYL-DL-PHE-b-NAPHTHYLESTER	100 & 250 mg
	(Cathepsin G substrate) m.w. 395.46	
02-5453-02	N-BENZOYL-L-PHE-VAL-ARG-7-AMIDO-4-METHYL-COUMARIN HCl	10 & 50 mg
	(Thrombin substrate)	
02-6226-03	N-BENZOYL-L-TYR-4-AMINO BENZOIC ACID SODIUM	250 & 500 mg
	(Chymotrypsin substrate)	
02-8256-03	BENZOYL-L-TYR HYDRAZIDE	100 & 250 mg
02-8590-03	N-BENZOYL-DL-VAL	1 & 10 gm
	[2901-80-6] m.w. 221.26 m.p.132°C	

07-5454-02	N-BENZOYL-L-VAL-GLY-ARG-7-AMIDO-4-METHYL-COUMARIN HCl (Plasminogen substrate)	10 & 50 mg
02-8908-03	O-BENZYL-N-ACETYL-D-SERINE	1 & 5 gm
01-7910-25	D-BIOTIN (Vitamin H) Cryst. [22879-79-4] m.w. 450.68 m.p.215-217°C	100 mg & 1 gm
02-8909-03	S-BENZYL-L-CYSTEINE-S-BENZYL-L-CYSTEINE ETHYLESTER	1 & 10 gm
02-4477-03	S-BENZYL-L-CYSTEINE BENZYLESTER-p-TOSYLATE	100 & 500 mg
02-7442-03	BENZYLIDENE CBZ-NEURAMINIC ACID	1 & 5 gm
02-4824-06	BICUCULLINE [485-49-4] m.w. 267.36	50 & 100 mg
02-8230-06	BILIRUBIN [635-65-4] CHR pure m.w. 584.65	100 mg & 1 gm

Biological Buffers see separate section

02-8003-06	2-(4-BIPHENYLYL)-5-PHENYLOXAZOLE (BPO)	250 & 500 mg
02-4162-06	2,3-BIS(BROMOMETHYL) QUINOXALINE [3138-86-1] m.w. 316.01 m.p.150-151°C	1 & 10 gm
02-0244-06	2',7'-BIS(CARBOXYETHYL) CARBOXYFLUORESCEIN m.w. 520.45	25 & 50 mg
13-4838-06	p-bis(O-METHYLSTYRYL) BENZENE	1 & 5 gm
02-4221-04	1,1-BIS-THIOETHYLMERCAPTAL-D-GALACTOSE m.w. 286.4	500 mg & 1 gm
02-0720-03	N-a-t-BOC-D-ALA m.w. 189.21	500 mg & 1 gm
02-5455-02	N-BOC-L-ALA-ALA-p-NITROANILIDE (Elastase substrate)	25 & 50 mg

02-5456-02	N-BOC-L-ALA-ALA-PRO-ALA-p-NITROANILIDE (Elastase substrate)	10 & 25 mg
07-3763-02	t-BOC-b-ALA-TRP-MET-ASP-PHE-NH₂ PENTAGASTRIN	25 & 50 mg
02-1616-03	N-a-t-BOC-L-a-AMINO-N-BUTYRIC ACID [77302-72-8] m.w. 203.25	500 mg & 1 gm
02-0721-03	N-a-t-BOC-L-ARG [13726-76-6] m.w. 274.33	500 mg & 1 gm
02-7869-02	BOC-ARG-VAL-ARG-ARG-7-AMIDO-4-METHYLCOUMARIN (Furin substrate)	5 mg
02-4910-02	t-BOC-ASP(OBut)-TYR-MET-GLY-TRP-MET-ASP-PHE-NH₂ m.w. 1219.5 (For Labelling with S35)	25 & 50 mg
01-0794-02	t-BOC-ASP-TYR(SO₃H)-MET-GLY-TRP-MET-ASP-PHE NH₂ (BOC CCK-8) m.w. 1294.5	5 & 10 mg
02-0623-03	N-a-t-BOC-L-(S-BENZYL) CYSTEINE m.w. 311.40	500 mg & 1 gm
02-0724-03	bis-BOC-L-CYSTINE	100 & 500 mg
02-6319-02	BOC-CYSTINE-ALA-ALA-GLY-VAL-CYSTEINE-OMe m.w. 634.8	10 & 25 mg
02-6378-02	BOC-CYSTINE-CYS DCHA SALT m.w. 503.7	25 & 100 mg
02-6377-02	BOC-CYSTINE-CYSTEINE-OMe m.w. 336.4	25 & 100 mg
02-6383-02	BOC-CYSTINE-GLY-GLY-GLY-GLY-CYSTEINE-OMe m.w. 564.7	10 & 50 mg
02-6382-02	BOC-CYSTINE-PHE-CYSTEINE-OMe m.w. 483.6	25 & 100 mg
02-1624-03	N-a-t-BOC-L-GLU-a-T-BUTYLESTER m.w. 303.36	500 mg & 1 gm

02-7803-02	BOC-GLU(OBzl)-ALA-ARG-7-AMIDO-4-METHYLCOUMARIN HCl (Coagulation factor X1a)	10 mg
02-7793-02	BOC-GLU(OBzl)-GLY-ARG-7-AMIDO-4-METHYLCOUMARIN HCl (Coagulation factor IXa)	10 mg
02-8088-02	BOC-GLU-GLU-LEU-METHYLESTER (Vitamin K dependent carboxylase)	5 mg
02-7826-02	BOC-GLN-GLY-ARG-7-AMIDO-4-METHYLCOUMARIN HCl (Coagulation factor XIIa)	10 mg
02-1992-02	N-a-t-BOC-GLY-TRP-MET-ASP-PHE NH₂ (Gastrin 13-17, BOC Protected) (BOC-CCK 29-33) m.w. 752.94	10 & 25 mg
02-0728-03	N-a-t-BOC-HYDROXY PROLINE DCHA SALT m.w. 231.25	500 mg & 1 gm
02-1632-03	N-a-t-BOC-L-LYS [2418-95-3] m.w. 246.32	500 mg & 1 gm
02-7801-03	BOC-LYS-METHYLESTER acetate (Coagulation factor Xa)	100 & 250 mg
02-0657-03	N-a-t-BOC-Ne-TFA-L-LYS m.w. 342.32	500 mg & 1 gm
02-1991-02	N-a-t-BOC-MET-GLY-TRP-MET-ASP-PHE NH₂ (BOC-CCK 28-33) m.w. 884.12	10 & 25 mg
02-1443-02	N-BOC-PHE-ALA-ALA-p-NITRO-PHE-PHE-VAL- LEU-4-HYDROXYMETHYLPYRIDINE ESTER (Subs. for Cathepsin D)	5 & 10 mg
02-0900-02	BOC-PHE-ALA-ALA-PHE-p-AMINO BENZOIC ACID (Metalloendopeptidase substrate) HPLC:99% m.w. 691.78 m.p.210-212°C	5 & 10 mg
02-8087-02	BOC-PHE-SER-ARG-7-AMIDO-4-METHYLCOUMARIN acetate (Tryptase)	1 mg
02-0730-03	N-a-t-BOC-IM-TOSYL-L-HIS m.w. 409.45	500 mg & 1 gm

02-1993-03	N-a-t-BOC-L-TRP-MET-ASP-PHE NH₂ (BOC-CCK 30-33) (BOC Tetragastrin) (Gastrin 14-17 BOC protected) [5235-21-2] m.w. 696.8	10 & 25 mg
02-1654-02	N-a-t-BOC-L-Tyr-Gly-Gly-Phe-Leu BOC-LEU ENKEPHALIN	10 & 25 mg
02-1653-02	N-a-t-BOC-L-TYR-GLY-GLY-PHE-MET BOC-Met Enkephalin m.w. 673.85	10 & 25 mg
02-1990-02	N-a-t-BOC-L-TYR-MET-GLY-TRP-MET-ASP-PHE NH₂ BOC-CCK 27-33 m.w. 1047.29	10 & 25 mg
02-9880-02	BOC-TYR(SO₃H)-NLE-GLY-TRP-NLE-ASP-2-PHENYLETHYLESTER NH₃ (CCK "JMV180") m.w. 1084.3 (Sol:DMSO)	1 & 5 mg
02-3060-02	BOC-TYR(SO₃H)-NLE-GLY-D-TRP-LE-ASP-2-PHENYLETHYLESTER NH₃ (D-Trp "JMV-180") (D-Trp ⁴) (CCK 27-32 (Nle _{28,31})) m.w. 1084.3	1 & 5 mg
02-2470-03	N-BOC-L-VAL-N-HYDROXSUCCINIMIDE m.w. 314.34	500 mg & 1 gm
02-0731-03	N-a-t-BOC-D-VAL m.w. 217.26	500 mg & 1 gm

N-a-t-BOC-D-VAL-L-LEU-Ne-CBZ-L-LYS

(prodrug peptide) m.w. 592.7 available in 50 & 100 mg

02-9999-02

Peptide for protease activated 'prodrugs' for improved therapeutic effectiveness in cancer chemotherapy

In 1980 Carl, Chakravarty, Katzenellenbogen and Weber (proc.nat.acad.sci.,U.S.A.,77,No.4,2224 (1980) reported on the use of a peptide coupled to two different anti-cancer agents (a-amino-3-chloro-4,5-dihydro-5-isoxazoleacetic acid & phenylenediamine mustard). they classified the coupled agents as "protease activated prodrugs" and tested them in-vitro against either normal chicken embryo fibroblasts, which display a low level of plasminogen activator and their virally transformed counterparts with high levels of plasminogen activator.

Since many types of malignant cells and human tumors have increased concentrations of protease plasminogen activator that converts plasminogen to the highly activated protease plasmin; plasmin cleaves various low molecular weight compounds coupled to an appropriate peptide specifier. using this theory, their investigations tested the feasibility that such protease activated prodrugs would be locally activated by tumor-associated plasmin and be less toxic to normal cells.

The results showed a 5-fold increase in selectivity for the transformed cells compared to the free drugs. it is suggested that treatment with protease activated prodrugs of tumors that produce increased levels of plasminogen activator may show increased therapeutic effectiveness. since tests were done in-vitro and in-vivo testing may demonstrate a different mode of selectivity, the commercial availability of this peptide will allow further in-vitro research with a hopefully ideal coupling peptide eventually made available to solidify this unique concept.

Research Plus is offering the same basic peptide but have changed the protecting group at the lysine residue from BOC to CBZ. this was done because of the selective removal permitted by CBZ and its protective ability against racemization.

02-7741-02	BOC-VAL-LEU-LYS-7-AMIDO-4-METHYLCOUMARIN salt (Calpain)	10 & 25 mg
16-5146-02	BOMBESIN (Pyroglu-Gln-Arg-Leu-Gly-Asn-Gln-Trp-Ala-Val-Gly-Hs-Leu-Met NH ₂) m.w. 1650.81	1 mg
02-6227-02	(LYS³) BOMBESIN (Pyroglu-Gln-Lys-Leu-Gly-Asn-Gln-Trp-Ala-Val-Gly-His-Leu-Met NH ₂) m.w. 1592.11	1 mg
02-6228-02	(TYR⁴) BOMBESIN (Pyroglu-Gln-Arg-Tyr-Gly-Asn-Gln-Trp-Ala-Val-Gly-His-Leu-Met NH ₂) m.w. 1670.13	1 mg
02-6229-02	BOMBESIN 8-14 (Trp-Ala-Val-Gly-His-Leu-Met-NH ₂)	1 mg

01-9100-02	BOMBESIN 9-14 (Ala-Val-Gly-His-Leu-Met-NH ₂) m.w. 624.76	10 mg
07-9102-02	BOMBESIN 11-14 (Gly-His-Leu-Met NH ₂ .CH ₃ COOH) m.w. 514.60	10 & 25 mg
08-9104-02	BOMBESIN 12-14 HIS-LEU-MET NH₂.CH₃COOH m.w. 458.60 C:48.86 H:7.41 N:17.85 S:7.23	10 & 25 mg
12-9103-02	BOMBESIN 13-14 L-LEU-L-MET NH₂ m.w. 261.40 C:50.21 H:8.77 N:15.83 S:12.27	10 & 25 mg
18-6188-30	BONE MARROW POWDER (Bovine)	100 & 500 gm

BRADYKININ, Fragments and Analogs

01-3764-02	BRADYKININ TRIACETATE (Arg-Pro-Pro-Gly-Phe-Ser-Pro-Phe-Arg-acetate) m.w. 1060.2 [5979-11-3]	5 mg
01-5448-02	BRADYKININ 1-3 (Arg-Pro-Pro acetate) m.w. 428.47	10 mg
02-6230-02	BRADYKININ 1-5 (Arg-Pro-Pro-Gly-Phe acetate)	5 mg
02-6231-02	BRADYKININ 1-6 (Arg-Pro-Pro-Gly-Phe-Ser acetate)	5 mg
02-6232-02	BRADYKININ 1-7 (Arg-Pro-Pro-Gly-Phe-Ser-Pro acetate)	5 mg
02-6233-02	BRADYKININ (Arg-Pro-Pro-Gly-p-chloro-Phe-Ser-Pro-p-chloro-Phe-Arg acetate) (p-Chloro-Phe ^{5,8})	1 mg
02-6234-02	BRADYKININ (Arg-Pro-Hyp-Gly-Phe-Ser-Pro-Phe-Arg (Hyp ³))	1 mg

02-6235-02	BRADYKININ (Arg-Pro-Pro-Gly-Phe-Ser-Pro-Tyr-Arg (Tyr ⁸)) m.w. 1076.2	1 mg
12-5117-02	LYS-BRADYKININ (Kallidin) (Lys-Arg-Pro-Pro-Gly-Phe-Ser-Pro-Phe-Arg) m.w. 1188.4	5 mg
02-6236-02	MET-LYS-BRADYKININ (Met-Lys-Arg-Pro-Pro-Gly-Phe-Ser-Pro-Phe-Arg) m.w. 1319.6	5 mg
20-6633-02	TYR-BRADYKININ (Tyr-Arg-Pro-Pro-Gly-Phe-Ser-Pro-Phe-Arg) m.w. 1223.5	1 mg
02-6239-02	(DES ARG¹) BRADYKININ (Pro-Pro-Gly-Phe-Ser-Pro-Phe-Arg)	5 mg
01-6638-02	BRADYKININ (Arg-Pro-Pro-Gly-Phe-Ser-Pro-Phe acetate (Des Arg ⁸)) m.w. 904.03	5 mg
02-6240-02	BRADYKININ (Arg-Pro-Pro-Gly-Phe-Ser-Pro-Leu (Des Arg ⁹ , Leu ⁸)) m.w. 870.02	5 mg
02-6241-02	BRADYKININ (Arg-Pro-Gly-Phe-Ser-Pro-Phe-Arg (Des Pro ²)) m.w. 963.11	5 mg
16-6636-02	BRADYKININ POTENTIATOR B (Pyroglu-Gly-Leu-Pro-Pro-Arg-Pro-Lys-Ile-Pro-Pro-AcOH) m.w. 1182.6	1 mg
16-6637-02	BRADYKININ POTENTIATOR C (Pyroglu-Gly-Leu-Pro-Pro-Gly-Pro-Pro-Ile-Pro-Pro) m.w. 1052.2	1 mg
02-6242-02	BRADYKININ POTENTIATOR FACTOR BPP 5a (Pyroglu-Lys-Trp-Ala-Pro)	5 mg
	BRADYKININ POTENTIATOR FACTOR BPP9a (Pyroglu-Trp-Pro-Arg-Pro-Gln-Ile-Pro-Pro) m.w. 1101.41	5 mg
 BRAIN PEPTIDES see: TYR and ENKEPHALINS		
02-5665-30	BRAIN SUBSTANCE	100 mg & 1 gm

02-0651-06	N-BROMOACETAMIDE Monohydrate, cryst. [79-15-2]	10 & 50 gm
02-5685-04	1-BROMOACETAMIDO-1-DEOXY-β-D-GALACTOPYRANOSE [337-58-19-9] m.w. 300	50 & 100 mg
02-0607-06	2-BROMOACETAMIDO-4-NITROPHENOL [3947-58-8]	1 & 5 gm
02-4834-06	BROMOACETYL NAPHTHYLAMINE	50 & 100 mg
02-0727-07	β-BROMOADENOSINE-5'-TRIPHOSPHATE sodium [8-035-56-5]	25 & 100 mg
02-4825-03	ε-BROMO CAPROIC ACID [4224-70-8] m.w. 195.06 m.p. 33-35°C	1 gm
02-7867-03	5-BROMO-4-CHLORO-3-INDOLYL acetate (Esterase substrate)	50 & 100 mg
02-7871-03	5-BROMO-4-CHLORO-3-INDOLYL-β-D-FUCOSIDE (β-Galactosidase substrate)	10 mg
02-7873-03	5-BROMO-4-CHLORO-3-INDOLYL-β-D-GLUCOSIDE (β-Glucosidase substrate)	10 mg
02-7730-03	5-BROMO-4-CHLORO-3-INDOLYL PHOSPHATE-p-TOLUIDINE (Acid and Alkaline phosphatase substrate)	10 mg
02-7868-03	5-BROMO-6-CHLORO-3-INDOLYL acetate (Esterase substrate)	100 & 250 mg
02-4170-06	BROMODURENE [1648-53-3] m.w. 213.12	5 & 25 gm
02-4171-06	N-BROMOETHYLPHTHALIMIDE [574-98-1] m.w. 254.09 m.p. 80-82°C	10 & 50 gm
02-4172-06	5-BROMO-2-FUROIC ACID [585-70-6] m.w. 190.99 m.p. 183-185°C	5 gm
02-2047-06	5-BROMO INDOLE-2-CARBOXYLIC ACID m.w. 239.9	500 mg & 1 gm

02-7872-03	5-BROMO-3-INDOLYL-β-D-GALACTOSIDE (β -Galactosidase substrate)	10 mg
02-0039-06	3-BROMO-2-NAPHTHYLAMINE m.w. 222.22	50 & 100 mg
02-3408-04	6-BROMO-2-NAPHTHYL-β-D-GALACTOPYRANOSIDE [15572-3-0-2] m.w. 385.2	50 & 250 mg
02-3409-04	6-BROMO-2-NAPHTHYL-β-D-GLUCOPYRANOSIDE [15548-61-5] m.w. 385.2	250 mg & 1 gm
02-4173-06	2-BROMO-4-NITROTOLUENE [7745-93-9] m.w. 216.05 m.p. 75-76°C	5 & 25 gm
02-2591-06	BROMO PHENOL BLUE	5 & 10 gm
02-6245-03	DL-t-BUTYLGLYCINE m.w. 131.18	50 & 100 mg
02-6247-03	L-t-BUTYLGLYCINE m.w. 131.18	50 & 100 mg
02-4826-03	O-t-BUTYL-L-SERINE m.w. 161.19	100 & 250 mg
02-2362-03	O-t-BUTYL-L-THREONINE m.w. 174.22	100 & 250 mg
02-6253-03	O-t-BUTYL-L-TYROSINE m.w. 237.3	100 & 250 mg
02-3413-06	BUTYRYLCHOLINE IODIDE [2494-56-6] m.p. 86-88°C	1 & 10 gm
02-3414-06	S-BUTYRYLTHIOCHOLINE IODIDE 98% [1866-16-6] m.p. 172-174°C	1 & 10 gm

C**CAERULEIN and Fragments**

07-2750-02	CAERULEIN 6-10 (Gly-Trp-Trp-Met-Asp-NH ₂) (Gastrin 13-17) m.w. 652.17	10 & 25 mg
20-7246-02	CAERULEIN 7-10 (L-Trp-Met-Asp-Phe NH ₂) [1947-37-1] m.w. 595.56 m.p.242°C (dec) C:57.56 H:6.14 N:13.89 S:5.56	50 & 100 mg
20-9991-02	CAERULEIN 7-10 DEAMINATED (L-Trp-Met-Asp-Phe OH) m.w. 597.68 C:57.94 H:5.85 N:11.58 S:5.41	25 & 100 mg
13-4605-02	CAERULEIN 8-10 (L-Met-Asp-Phe NH ₂) (C-term. of CCK-PZ) m.w. 409.46 C:52.34 H:6.28 N:13.53 S:8.15	25 & 50 mg
01-0963-02	CAERULEIN 9-10 (A-L-Asp-Phe-NH ₂) (Gastrin 16-17) m.w. 278.28	50 & 100 mg

a-CAESIN see: **Arg-Tyr-Leu-Gly-Tyr-Leu-Gly**

CALCITONIN, HUMAN, synth. (99+% HPLC)

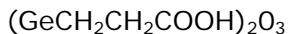
03-2770-02

(CYS-GLY-ASN-LEU-SER-THR-CYS-MET-LEU-LEU-GLY-THR-TYR-THR-GLN-ASP-
PHE-ASN-LYS-PHE-HIS- THR-PHE-PRO-GLN-THR-ALA-ILE-GLY-VAL-ALA-PRO-NH₂)

Amino Acids: ASP: 2.94; THR: 4.75; SER: 1.08; GLN: 2.06; PRO: 2.03; GLY: 3.87; ALA: 2.00;
CYS: 1.95; VAL: 1.05; MET: 1.07; ILE: 1.01; LEU: 2.05; TYR: 1.02; PHE: 2.85; HIS: 1.02; LYS: 1.01

Peptide content: 89.1% : [21215-62-3] m.w. 3417.9	1 & 5 mg
03-1931-02 CALCITONIN, EEL	1 mg
03-1930-02 CALCITONIN, SALMON	1 mg
03-4839-06 CALCIUM FLAVONATE GLYCOSIDE	1 & 5 gm
03-0859-04 CALCIUM-D-GALACTONATE pentahydrate [69617-74-9] m.w. 520	10 & 25 gm
03-0860-04 CALCIUM-α-D-GLUCOHEPTONATE m.w. 526	100 & 500 gm
03-0861-04 CALCIUM-D-GLUCONATE [299-28-5] m.w. 430.4	500 gm & 1 kg
03-8136-10 CALCIUM SULFATE dihydrate [7778-18-9] m.w. 172.17 98-102%	100 gm
03-0988-06 CALMAGITE (Metal Indicator for Ca) [3147-14-6] 358.37	1 & 10 gm
03-8004-06 DL-CANADINE	10 & 25 mg
03-8599-03 N-CARBAMYL-DL-ASP [923-37-5] m.w. 176.13	1 & 5 gm
03-7452-06 β-CARBONAPHTHOXY CHOLINE IODIDE [63175-14-4]	500 mg & 1 gm
03-7419-06 CARBON TETRABROMIDE [558-13-4] m.p. 88-90°C	5 & 25 gm
03-5687-06 CARBONYLCYANIDE-<i>p</i>-TRIFLUORO-METHOXY PHENYLHYDRAZONE [370-86-5]	10 mg

bis-b-CARBOXYETHYL GERMANIUM SESQUIOXIDE



03-8874-06

Form: white powder **Purity:** min.99%

Ge content: 42% **Arsenic (As):** max.0.0002% **Lead (Pb):**max.0.0005%

Solubility: prox.0.5 grams in H₂O 100 & 250 mg

Application: For non-human investigations into Hepatic dysfunction, Nephritis, Hypertension and certain carcinomas. Also appears to induce interferon increase in animals.

References:

1. Kumano,n.,nakai,y,et al; sci.rep.res.inst.,Tokyo Univ.,3-4,89 (1978)
2. Ishida,N.,et al; prod. Jap0 cancer aswsoc.,112 (1979)
3. Shoji,Y et al; kiso & rinsho 14:90 (1980)
4. Ryan,j.l.,glode,l.m. & rosenstreichmd.i.,j. immunol.122:932 932 (1979)
5. Tomizawa et al; asai germanium kenkysho-shi, vol.1,12 (1971)
6. Sato,k.,et al; kiso & rinsho 7,719 (1973)
7. Kuga et al.,acta path.jap.26 63 (1976)
8. Sato h,et al; nippon rinsho 29 (7)1818 (1971)

03-7431-03	2-CARBOXY BUTYRIC ACID [601-75-2]	500 mg & 1 gm
03-3885-06	5-CARBOXYFLUORESCEIN m.w. 376.3	50 & 250 mg
03-3886-06	6-CARBOXYFLUORESCEIN m.w. 376.3	50 & 250 mg
03-0908-18	CARBOXYPEPTIDASE B (Hog pancreas) [9025-24-5] EC 3.4.17.2 Tris. SOI. Act: 150 U./mg.	5 mg
03-8006-06	m-CARBOXY PHENOL INDO-2,6-DIBROMOPHENOL	50 & 100 mg

03-7915-25 **DL-CARNITINE HCL 99%** 10 & 100 gm
[461-05-2] m.w. 197.66 m.p. 196-197°C

L-Carnosine see: **b-Ala-L-His**

03-7916-25 **trans-b-CAROTENE, Cryst.** 1 & 10 gm
m.w. 536.89 m.p. 178-179°C Prox. 1.6 mu/gm.

03-8007-06 **CARVACROL INDOPHENOL SODIUM** 1 & 5 gm

03-7053-17 **(-) trans CARYOPHYLLEN** 5 ml
[87-44-5] (b-Caryophyllen) m.w. 204.19

03-4479-02 **CBZ-L-ALA-D-ALA** 50 & 100 mg
m.w. 294.31

03-4480-02 **CBZ-D-ALA-L-ALA** 50 & 100 mg
m.w. 294.31

03-4481-02 **CBZ-D-ALA-D-ALA** 50 & 100 mg
m.w. 294.31

03-5470-02 **CBZ-L-ALA-ALA-LEU-p-NITROANILIDE** 25 & 50 mg
m.w. 527.58 (Substrate for Subtilisin A)

03-1657-02 **CBZ-L-ALA-ARG** 50 & 100 mg
m.w. 379.42

03-5469-02 **CBZ-L-ALA-ARG-ARG-4-METHOXY-b-NAPHTHYLAMIDE .2HCL** 10 & 25 mg
m.w. 763.75 (Substrate for Cathepsin B)

03-1658-02 **CBZ-L-ALA-ASN** 50 & 100 mg
m.w. 337.33

03-1659-02 **CBZ-L-ALA-ASP** 50 & 100 gm
m.w. 338.32

03-1660-02 **CBZ-L-ALA-GLU** 50 & 100 mg
m.w. 352.34

03-4482-02	CBZ-L-ALA-GLY BENZYLESTER m.w. 371.40	50 & 100 mg
03-1662-02	CBZ-L-ALA-ILE m.w. 336.39	50 & 100 mg
03-1663-02	CBZ-L-ALA-LEU [24959-68-0] m.w. 350.42	100 & 250 mg
03-4483-02	CBZ-L-ALA-D-LEU m.w. 350.42	50 & 100 mg
03-4484-02	CBZ-D-ALA-L-LEU m.w. 350.42	50 & 100 mg
03-1664-02	CBZ-L-ALA-L-LEU NH₂ m.w. 349.43	50 & 100 mg
03-1665-02	CBZ-L-ALA-MET m.w. 354.42	50 & 100 mg
03-3487-02	CBZ-L-ALA-PHE [2768-53-8] m.w. 370.40	25 & 50 mg
03-1666-02	CBZ-L-ALA-PRO [21027-01-0] m.w. 320.34	50 & 100 mg
03-1667-02	CBZ-L-ALA-THR m.w. 324.33	50 & 100 mg
03-5955-02	CBZ-L-ALA-THR-b-NAPHTHYLAMIDE m.w. 449.5 C:66.64 H:5.99 N:9.28	10 & 25 mg
03-9115-02	CBZ-L-a-AMINOSUBERIC ACID	50 & 100 mg
03-5494-02	N-a-CBZ-L-ARG-ARG-b-NAPHTHYLAMIDE .2HCl (Cathepsin B substrate) m.w. 681.65	25 & 50 mg
03-3489-03	CBZ-L-ASN [2304-96-3] m.w. 266.25	1 & 5 gm
03-7457-03	CBZ-L-ASN-a-BENZYLESTER	500 mg & 1 gm

03-8605-03	CBZ-DL-ASN m.w. 266.25	1 & 5 gm
03-4486-03	CBZ-L-ASP [1152-61-0] m.w. 267.24	5 & 25 gm
03-7459-03	CBZ-L-ASP-a-BENZYLESTER [4779-31-1] m.w. 357.36	500 mg & 1 gm
03-2761-02	CHOLECYSTOKININ 26-32 protected, sulfated S1 (CBZ-Asp-Tyr(SO ₃ H)-Met-Gly-Trp-Met-Asp-NH ₂) m.w. 1301.2	10 & 25 mg
03-4487-02	CBZ-S-BENZYL-L-CYS-S-BENZYL-L-CYS m.w. 537.69	100 & 500 mg
03-4488-03	mono-CBZ-L-CYST	500 mg & 1 gm
03-8608-03	di-CBZ-L-CYST	250 & 500 mg
03-7445-04	N-CBZ-D-GLUCOSAMINE m.w. 313.3	500 mg & 1 gm
03-4490-03	CBZ-L-GLU ANHYDRIDE	100 & 500 mg
03-8913-03	CBZ-DL-GLU m.w. 281.26	1 & 5 gm
03-4489-03	CBZ-D-GLU m.w. 281.26	500 mg & 1 gm
03-4491-03	CBZ-g-L-GLU HYDRAZIDE	500 mg & 1 gm
03-5805-02	CBZ-GLU-GLY-GLN-GLN-GLY m.w. 651.6 C:49.9 H:5.91 N:14.71	10 & 50 mg
03-3762-02	CBZ-L-GLU-TRP m.w. 468.46	100 & 250 mg
03-0833-03	CBZ-L-GLN [2650-64-8] m.w. 280.28	5 & 25 gm
03-0834-03	CBZ-GLY [1138-80-3] m.w. 209.20	10 & 50 gm

03-0845-02	CBZ-GLY-L-ALA [3079-63-8] m.w. 280.28	500 mg & 1 gm
03-8916-02	CBZ-GLY-S-BENZYL-L-CYS ETHYLESTER m.w. 430.53	500 mg & 1 gm
03-8917-02	CBZ-GLY-S-BENZYL-L-CYS-S-BENZYL-L-CYS ETHYLESTER m.w. 622.80	500 mg & 1 gm
03-9117-03	CBZ-GLY-GLY-L-ARG-4-METHYLCOUMARYL-7-AMIDE (Urokinase substrate)	5 & 10 mg
03-7880-02	CBZ-GLY-GLY-ARG-b-NAPHTHYLAMIDE HCl (Neutral Endopeptidase 24.5 substrate)	10 & 25 mg
03-8081-02	CBZ-GLY-GLY-LEU-7-AMIDO-4-METHYLCOUMARIN (Subtilisin substrate)	10 & 25 mg
03-8080-02	CBZ-GLY-GLY-LEU-p-NITROANILIDE (Subtilisin substrate)	10 & 25 mg
03-7889-02	CBZ-GLY-PRO-b-NAPHTHYLAMIDE (Prolyl endopeptidase substrate)	25 & 50 mg
03-0851-02	CBZ-GLY-L-TYR [7801-35-6] m.w. 374.39	100 & 250 mg
03-4494-02	CBZ-GLY-L-TYR ETHYLESTER m.w. 401.43	100 & 250 mg
03-3508-02	CBZ-GLY-L-VAL (Oil) m.w. 310.35 m.p.109-111°C	500 mg & 1 gm
03-5953-02	CBZ-GLY-L-VAL-b-NAPHTHYLAMIDE m.w. 433.5 C:68.92 H:6.24 N:9.64	10 & 25 mg
03-8610-03	CBZ-a-DL-HIS [1928-57-5] m.w. 289.29	500 mg & 1 gm
03-1694-02	CBZ-L-HIS-GLY m.w. 346.34	50 & 100 mg

03-7882-02	CBZ-HIS-PHE-PHE-ETHYLESTER (Pepsin substrate)	25 & 50 mg
03-7883-02	CBZ-HIS-TYR-TYR-ETHYLESTER (Pepsin substrate)	25 & 50 mg
03-4485-03	CBZ-D-aiIoLE	100 & 500 mg
03-5954-02	CBZ-ILE-L-ALA-b-NAPHTHYLAMIDE m.w. 461.6 C:69.88 H:6.80 N:8.99	10 & 25 mg
03-4495-02	CBZ-L-ILE-D-ALA BENZYLESTER m.w. 427.52	250 & 500 mg
03-3514-02	CBZ-L-ILE-GLY m.w. 322.36	250 & 500 mg
03-8918-02	CBZ-L-ILE-ILE BENZYLESTER m.w. 469.61	100 & 250 mg
03-3518-02	CBZ-L-ILE-PHE m.w. 412.49	100 & 250 mg
03-3521-03	CBZ-L-LEU-p-NITROPHENYLESTER m.w. 386.40	1 & 5 gm
03-3522-02	CBZ-L-LEU-ALA [2817-13-2] m.w. 336.39	500 mg & 1 gm
03-4497-02	CBZ-D-LEU-L-ALA m.w. 336.39	50 & 100 mg
03-8614-02	CBZ-L-LEU GLY HYDRAZIDE , CHR pure m.w. 336.4 m.p.118-120°C	500 mg & 1 gm
03-4498-02	CBZ-L-LEU-D-LEU m.w. 378.47	50 & 100 mg
03-4499-02	CBZ-L-LEU-L-LEU m.w. 378.47	25 & 50 mg
03-8615-02	CBZ-L-LEU-LEUCINEAMIDE , CHR pure m.w. 377.48 m.p.209-210°C	100 & 250 mg

03-7881-02	CBZ-LEU-LEU-GLU-b-NAPHTHYLAMIDE (Neutral endopeptidase 24.5 substrate)	10 & 25 mg
03-4500-02	CBZ-L-LEU-PHE m.w. 412.49	25 & 50 mg
03-4501-02	CBZ-L-LEU-D-PHE m.w. 412.49	50 & 100 mg
03-4502-02	CBZ-D-LEU-L-PHE m.w. 412.49	50 & 100 mg
03-5956-02	CBZ-L-LEU-L-TYR-b-NAPHTHYLAMIDE m.w. 553.7 C:71.25 H:6.30 N:7.51	10 & 25 mg
03529-03	N-a-CBZ-L-LYS m.w. 280.33	1 & 5 gm
03-4504-03	N-e-CBZ-DL-LYS m.w. 280.33	500 mg & 1 gm
03-3531-03	N-e-CBZ-L-LYS METHYLESTER HCL m.w. 294.35	500 mg & 1 gm
03-4503-02	N,N-diCBZ-L-LYS-TRP m.w. 602.66	100 & 250 mg
03-8920-02	CBZ-L-MET-MET METHYLESTER m.w. 429.56	100 & 250 mg
03-1033-03	CBZ-NEURAMINIC ACID (93-97%) [17367-66-7]	25 & 100 mg
03-8619-03	N-d-CBZ-L-ORN [3304-51-6] m.w. 266.30	1 & 5 gm
03-8914-03	CBZ-L-PHE [1161-13-11] m.w. 299.33	5 & 25 gm
03-4506-03	CBZ-D-PHE [2448-45-5] m.w. 299.33	100 & 500 mg

03-4507-03	CBZ-DL-PHE [3588-57-6] m.w. 299.33	5 & 25 gm
03-1700-02	CBZ-L-PHE-ALA [21881-18-5] m.w. 370.40	100 & 250 mg
03-9118-02	CBZ-L-PHE-ARG-7-AMIDO-4-METHYLCOUMARIN (Substrate for plasma kallekrein / cathepsin L) m.w. 676.17	5 & 10 mg
03-4508-02	CBZ-L-PHE-GLY ETHYLESTER	100 & 250 mg
03-8468-02	N-a-CBZ-PHE-HIS-LEU (Subst. for Angioten.I Conv.enz)	25 & 50 mg
03-3537-02	CBZ-L-PHE-LEU (Substrate for Carboxypeptidases) [4313-73-9] m.w. 412.49	100 & 250 mg
03-8084-02	CBZ-PHE-LEU-ALA (Thermolysin substrate)	10 & 25 mg
03-4509-02	CBZ-L-PHE-PHE m.w. 446.50	50 & 100 mg
03-8921-02	CBZ-L-PHE-PHE ETHYLESTER m.w. 475.55	50 & 100 mg
03-4027-02	CBZ-L-PHE-TRP , CHR Pure m.w. 486.52 rot: -18° c=2 MeOH	100 & 250 mg
03-4511-03	CBZ-L-PRO NH₂ m.w. 248.28	100 & 500 mg
03-3547-02	CBZ-L-PRO-PHE-HIS-LEU-LEU-LEU-VAL-TYR-SER-b-NAPHTHYLAMIDE m.w. 1253.47 (Renin substrate)	10 & 25 mg
03-0840-03	CBZ-L-SER m.w. 239.23	1 & 5 gm
03-8915-03	CBZ-D-SER HYDRAZIDE	50 & 100 mg
03-4512-03	CBZ-L-THR BENZYLESTER m.w. 343.38	500 mg & 1 gm

03-5952-02	CBZ-L-THR-L-VAL-β-NAPHTHYLAMIDE m.w. 477.6 C:67.48 H:6.52 N:8.74	10 & 25 mg
03-7448-03	e-CBZ-a-TOSYL-L-LYS m.w. 434.51	500 mg & 1 gm
03-1709-02	CBZ-L-TRP-ALA [17388-71-5] m.w. 409.44	100 & 250 mg
03-8922-02	CBZ-L-TRP-TRP AMIDE m.w. 523.55	100 & 250 mg
03-4514-02	CBZ-L-TRP-TRP METHYLESTER m.w. 539.58	100 & 250 mg
03-7336-02	N-CBZ-L-TYR(SO₃H).2NH₃ CHR pure m.w. 429.5 C:47.83 H:9.69 S:7.35	50 & 100 mg
03-3554-03	CBZ-L-TYR-p-NITROPHENYLESTER [3556-56-7]	100 & 250 mg
03-2764-02	CBZ-TYR-MET-GLY-TRP-MET-ASP NH₂ (Desulfated CBZ CCK-PZ 27-32) m.w. 935.1	10 & 50 mg
03-2762-02	CBZ-TYR(SO₃)-MET-GLY-TRP-MET-ASP NH₂ .2NH₃ m.w. 1047.2	10 & 50 mg
03-2765-02	CBZ-TYR(SO₃H)-MET-GLY-TRP-MET-ASP-PHE OH (Sulfated CBZ CCK-PZ 27-33, unblocked) m.w. 1214.4	10 & 50 mg
03-8925-03	CBZ-D-VAL m.w. 251.28	1 & 5 gm
03-4515-03	CBZ-D-VAL CYANOMETHYLESTER	100 & 500 mg
03-1711-02	CBZ-L-VAL-GLY-ARG-p-NITROANILIDE ACETATE (For determ. of activity of serum proteases)	10 & 25 mg
03-5951-02	CBZ-L-VAL-ILE-β-NAPHTHYLAMIDE m.w. 489.6 C:70.78 H:7.09 N:8.46	10 & 25 mg
03-4516-02	CBZ-L-VAL-L-LEU m.w. 365.45	50 & 100 mg

03-4517-02	CBZ-L-VAL-D-LEU m.w. 365.45	50 & 100 mg
03-4518-02	CBZ-D-VAL-L-LEU m.w. 365.45	50 & 100 mg
03-4519-02	CBZ-D-VAL-D-LEU m.w. 365.45	50 & 100 mg
03-5031-02	CBZ-VAL-LYS-LYS-ARG-4-METHOXY-b-NAPHTHYLAMIDE (Substrate for Cathepsin B)	5 & 10 mg
03-4520-02	CBZ-L-VAL-D-PHE m.w. 398.46	50 & 100 mg
03-4521-02	CBZ-D-VAL-L-PHE m.w. 398.46	50 & 100 mg
03-8924-02	CBZ-L-VAL-VAL BENZYLESTER m.w. 441.53	100 & 250 mg
03-5950-02	CBZ-L-VAL-VAL-b-NAPHTHYLAMIDE m.w. 475.6 C:70.22 H:6.91 N:8.75	10 & 25 mg

CD₄ PEPTIDE fragments

20-1831-02	THR-TYR-ILE-CYS(Bzl)-GLU-VAL-GLU-ASP-GLN-LYS-GLU-GLU	1 mg
20-1832-02	THR-TYR-ILE-CYS(Bzl)-GLU(Bzl)-VAL-GLU-ASP-GLN-LYS-GLU-GLU	1 mg

The Duodenal Hormone - CCK

CCK or Cholecystokinin, the name coined by Ivy and Olberg in 1928, causes the gallbladder to contract and behaves differently than Secretin in some respects. CCK was prepared by Ivy, et al in 1929 isolated from the upper intestine of Hog, Dog, Sheep and cattle. In 1930, Ivy, et al injected human subjects with CCK with complete or partial evacuation of the gallbladder in 4 out of 5 subjects. Use of CCK as a therapeutic agent however was questioned since it apparently did nothing more than egg yolk and cream and fatty meals. The latter produced the same effect but in a slower manner. Purification of CCK in 1939 by Agren and subsequent work by Harper in the early 1950's and their "Pancreozymin" preparations continued the exploration of CCK. Mutt and then Jorpes and Mutt in the late 50's to early 60's researched the purification of CCK. In 1967 Jorpes and Mutt delineated the structure of CCK consisting of 33 amino acids.

CCK was the defined name in 1964 and 1966 by Jorpes and Mutt when they described both CCK and Pancrozymin activities and found essentially the same substance. However, due to differences in terminology in unitages it was decided that CCK would be the preferred name with Ivy dog units as the base for activity. In 1968-70 Jorpes and Jutt indicated that the CCK-octapeptide (CCK-8) showed full potency of total CCK, as did the synthetic and natural octapeptides. The pancreozymin activity of extracts of the duodenal-jejunal mucosa has been shown to be due to CCK.

In 1975, Dafny, et al administered CCK-8 peripherally and produced enhancement of acoustical evoked potentials in several regions of rat brain. In 1979, Della-Fera and Baile inhibited feeding in sheep with CCK-8 intracerebroventricularly. In 1979, Vijayas, et al administered CCK-8 into the third ventricle of conscious, female, ovariectomized rats and stimulated prolactin and GH release and inhibited LH and TSH release. In 1982, Sakamoto, Otsuki, et al., demonstrated that CCK or Caerulein stimulated both insulin secretions and pancreatic exocrine function if 5.6mM or more of glucose is present in perfused rat pancreas. Okabayaski, Otsuki, et al., (1983) in work with perfused rat pancreas showed that deaminated CK-8 had no effect on exocrine pancreatic secretion at a concentration of 100pM. C-terminal fragments of CCK with eight or more amino acid residues were a potent potentiator of insulin release as well as a pancreatic exocrine stimulant. Spanarkel, et al, indicate that CCK₂₇₋₃₂ amide antagonized the stimulation caused by CCK related agonists.

In 1984, Beglinger, et al., indicated that (Thr²⁸, Nle³¹) CCK25-33)-"Nona CCK"-, natural porcine CCK33 and synthetic Caerulein were found to be equipotent on a molar basis in stimulating exocrine pancreatic secretion. "Nona CCK" being less susceptible to oxidation than other CCK's offers interesting thought for medical and biological research.

01-7690-02	CHOLECYSTOKININ 26-28 , desulfated (Asp-Tyr-Met) m.w. 427.47	10 & 25 mg
01-8268-02	CHOLECYSTOKININ 26-28 , sulfated (Asp-Tyr(SO ₃ H)-Met.NH ₃) m.w. 524.6 C: 34.22 H: 3.81 N: 6.35 S: 8.55 Sol: DMSO	10 & 25 mg
01-7691-02	CHOLECYSTOKININ 26-29 , desulfated (Asp-Tyr-Met-Gly) m.w. 484.52	10 & 25 mg
01-2760-02	Ac, CHOLECYSTOKININ 26-32 (Acetyl-Asp(Ba/2)-Tyr(SO ₃ Ba/2)-Met-Gly-Trp-Met NH ₂) m.w. 1058.4	10 & 25 mg
03-2761-02	CHOLECYSTOKININ 26-32 protected, sulfated S1 (CBZ-Asp-Tyr(SO ₃ H)-Met-Gly-Trp-Met-Asp-NH ₂) m.w. 1301.2	10 & 25 mg
20-3061-02	CHOLECYSTOKININ 26-32 S3 (D-Tyr-Gly-Asp-Tyr(SO ₃ H)-Nle-Gly-Trp-Nle-Asp-2-Phenylethylester) ("OPE" analogue) ("D-Tyr-Gly JMV180") (D-Tyr-Gly-2-Phenylethylester) (>85% by HPLC) m.w. 1285.4	1 & 5 mg
01-0798-02	Ac, CHOLECYSTOKININ 26-33 , sulfated (Acetyl-Asp-Tyr(SO ₃ H)-Met-Gly-Trp-Met-Asp-Phe NH ₂) m.w. 1236.5	10 & 25 mg
01-0323-02	CHOLECYSTOKININ-8 26-33 , desulfated (Asp-Tyr-Met-Gly-Trp-Met-Asp-Phe NH ₂) m.w. 1063.2	10 & 25 mg
01-0340-02	CHOLECYSTOKININ-8 26-33 , sulfated (Asp-Tyr(SO ₃ H)-Met-Gly-Trp-Met-Asp-Phe NH ₂ .2NH ₃) m.w. 1144.3	1, 5 & 10 mg
01-0341-02	CHOLECYSTOKININ-8 , sulfated, deaminated (Asp-Tyr(SO ₃ H)-Met-Gly-Trp-Met-Asp-Phe-OH .2-3 NH ₃) m.w. 1144.3 (w/o NH ₃)	1 & 5 mg
01-0794-02	BOC CHOLECYSTOKININ-8 (T-BOC-Asp-Tyr(SO ₃ H)-Met-Gly-Trp-Met-Asp-Phe NH ₂) m.w. 1294.5	5 & 10 mg
02-9880-02	CHOLECYSTOKININ "JMV180" (BOC-Tyr(SO ₃ H)-Nle-Gly-Trp-Nle-Asp-2-Phenylethylester NH ₃) m.w. 1084.3 (Sol:DMSO)	1 & 5 mg

02-3060-02	CHOLECYSTOKININ 27-32 (D-Trp "JMV-180") (D-Trp4) (Nle ^{28,31}) (BOC-Tyr(SO ₃ H)-Nle-Gly-D-Trp-Nle-Asp-2-Phenylethylester NH ₃) m.w. 1084.3	1 & 5 mg
03-2764-02	CBZ CHOLECYSTOKININ-PZ 27-32 , desulfated S2 (CBZ-Tyr-Met-Gly-Trp-Met-Asp NH ₂) m.w. 935.1	10 & 50 mg
03-2762-02	CBZ CHOLECYSTOKININ-PZ 27-32 , sulfated S1 (CBZ-Tyr(SO ₃)-Met-Gly-Trp-Met-Asp NH ₂ .2NH ₃) m.w. 1047.2	10 & 50 mg
20-2763-02	CHOLECYSTOKININ 27-32 , sulfated (L-Tyr(SO ₃)-Met-Gly-Trp-Met-Asp NH ₂) m.w. 1016.4	10 & 50 mg
02-1990-02	BOC CHOLECYSTOKININ 27-33 (N-a-t-BOC-L-Tyr-Met-Gly-Trp-Met-Asp-Phe NH ₂) m.w. 1047.29	10 & 25 mg
03-2765-02	CBZ CHOLECYSTOKININ-PZ 27-33 , sulfated, unblocked (CBZ-Tyr(SO ₃ H)-Met-Gly-Trp-Met-Asp-Phe OH) m.w. 1214.4	10 & 50 mg
20-7375-02	CHOLECYSTOKININ 27-33 (L-Tyr-Met-Gly-Trp-Met-Asp-Phe NH ₂) m.w. 947.07 C:55.96 H:5.95 N:12.99 S:6.62	10 & 25 mg
20-6611-02	CHOLECYSTOKININ 27-33 (Tyr(SO ₃ H)-Met-Gly-Trp-Met-Asp-Phe NH ₂ .NH ₃) m.w. 1062.30	10 & 25 mg
01-4912-02	Ala¹-CHOLECYSTOKININ 27-33 desulfated (L-Ala-Tyr(SO ₃ H)-Met-Gly-Trp-Met-Asp-Phe NH ₂) (Gastrin 11-17 (Met ³)) sulfated m.w. 1116.3	10 & 25 mg
02-1991-02	BOC-CHOLECYSTOKININ 28-33 (N-a-t-BOC-Met-Gly-Trp-Met-Asp-Phe NH ₂) m.w. 884.12	10 & 25 mg
13-5025-02	CHOLECYSTOKININ-PZ 28-33 (L-Met-Gly-Trp-Met-Asp-Phe NH ₂) m.w. 783.90 C:54.56 H:6.12 N:13.94 S:8.08	10 & 25 mg
02-1992-02	BOC CHOLECYSTOKININ 29-33 (N-a-t-BOC-Gly-Trp-Met-Asp-Phe NH ₂) (Gastrin 13-17, BOC protected) m.w. 752.94	10 & 25 mg
07-9992-02	CHOLECYSTOKININ 29-33 deaminated S2 (Gly-Trp-Met-Asp-Phe OH) Gastrin 14-17 m.w. 654.72	10 & 25 mg

07-2750-02	CHOLECYSTOKININ 29-33 S1 (Gly-Trp-Met-Asp-Phe-NH ₂) (Gastrin 13-17) m.w. 652.17	10 & 25 mg
07-9994-02	CHOLECYSTOKININ 29-33 (Gly-Trp-Met-Asp-Phe-Gly-Arg) (Gly-Arg S2 Gastrin 14-17 Gly-Arg) m.w. 867.0	10 & 25 mg
02-1993-03	BOC CHOLECYSTOKININ 30-33 (Gastrin 14-17 BOC protected) (N-a-t-BOC-L-Trp-Met-Asp-Phe NH ₂) (BOC Tetragastrin) [5235-21-2] m.w. 696.8	10 & 25 mg
20-9991-02	CHOLECYSTOKININ 29-33 (L-Trp-Met-Asp-Phe OH) m.w. 597.68 C:57.94 H:5.85 N:11.58 S:5.41	25 & 100 mg
20-7246-02	CHOLECYSTOKININ 30-33 S2 (L-Trp-Met-Asp-Phe NH ₂) [1947-37-1] m.w. 595.56 m.p. 242°C (dec) C:57.56 H:6.14 N:13.89 S:5.56	50 & 100 mg
13-4605-02	CHOLECYSTOKININ 31-33 S2 (L-Met-Asp-Phe NH ₂) m.w. 409.46 C:52.34 H:6.28 N:13.53 S:8.15	25 & 50 mg
01-0963-02	CHOLECYSTOKININ 32-33 S2 (a-L-Asp-Phe-NH ₂) m.w. 278.28	50 & 100 mg

NONA-CHOLECYSTOKININ THR²⁸, NLE³¹ (25-33)

(Identical in potency to CCK-33 and pure Caerulein)

01-2710-02	Nona CHOLECYSTOKININ-Thr²⁸ Nle³¹ (Arg-Asp-Tyr(SO ₃ H)-Thr-Gly-Trp-Nle-Asp-Phe NH ₂) m.w. 1251.37	1 & 5 mg
20-8354-02	Nona CHOLECYSTOKININ (Tyr-Arg-Asp-Tyr(SO ₃ H)-Thr-Gly-Trp-Nle-Asp-Phe-NH ₂) m.w. 1414.54	1 & 2.5 mg
01-2718-02	Nona CHOLECYSTOKININ 26-33, sulfated (Asp-Tyr(SO ₃ H)-Thr-Gly-Trp-Nle-Asp-Phe-NH ₂ .NH ₃) m.w. 1129.2	1 & 5 mg
01-2719-02	Nona CHOLECYSTOKININ 26-33, desulfated (Asp-Tyr-Thr-Gly-Trp-Nle-Asp-Phe-NH ₂) m.w. 1015.15	1 & 5 mg

20-2720-02	TYR-Nona-CHOLECYSTOKININ 26-33 (Tyr-Asp-Tyr(SO ₃ H)-Thr-Gly-Trp-Nle-Asp-Phe-NH ₂) m.w. 1292.4	1 & 5 mg
20-2721-02	(TYR-GLY (NLE^{28,31}) - CHOLECYSTOKININ 26-33) (D-Tyr-Gly-Asp-Tyr(SO ₃ H)-Nle-Gly-Trp-Nle-Asp-Phe.NH ₂ .2NH ₃) m.w. 1361.5	1 & 5 mg
20-2783-02	D-TYR-GLY-TYR(SO₃H)-NLE-GLY-TRP-NLE-(N-MeASP)-PHE-NH₂ S3 (Label Ready CCK "A" Agonist) m.w. 1225.4	1 & 5 mg
02-4910-02	(OBUT¹)-CHOLECYSTOKININ 26-33 protected S4 (t-BOC-Asp(OBut)-Tyr-Met-Gly-Trp-Met-Asp-Phe-NH ₂) (For Labelling with S35) m.w. 1219.5	25 & 50 mg
03-0864-04	CELLOBIOSE m.w. 342.29	5 & 50 gm
03-0865-04	CELLOBIOSE OCTAACETATE [5346-90-7] m.w. 678.2	10 & 100 gm

CESIUM and RUBIDIUM SALTS see separate section

03-0866-04	CHITIN [1398-61-4] m.w. 676.6	100 gm & 1 kg
03-3244-21	CHLORAMPHENICOL [56-75-7] m.w. 323.14	5 & 25 gm
03-8008-06	CHLOROACETOPYROCATECHOL	10 & 25 gm
03-1714-03	N-CHLOROACETYL-b-ALA m.w. 165.58	5 & 25 gm
03-1715-03	N-CHLOROACETYL-L-ALA m.w. 165.58	5 & 25 gm
03-6859-03	CHLOROACETYL-D-ALA m.w. 165.58	1 & 5 gm

03-6860-03	CHLOROACETYL-DL-ALA m.w. 165.58	5 & 25 gm
03-8624-03	N-CHLOROACETYL-L-α-AMINO BUTYRIC ACID m.w. 179.60	1 & 5 gm
03-1718-03	N-CHLOROACETYL-L-GLU	5 & 25 gm
03-1719-03	N-CHLOROACETYL GLY [6819-96-6] .w. 151.55	5 & 25 gm
03-4522-02	CHLOROACETYL-GLY-D-ALA m.w. 223.64	25 & 50 mg
03-8625-02	CHLOROACETYL-GLY-GLY [15474-96-1] m.w. 209.61	500 mg & 1 gm
03-6863-03	CHLOROACETYL-GLY-GLY-GLY-GLY	25 & 50 mg
03-8626-03	N-CHLOROACETYL-L-ILE m.w. 207.65	1 & 5 gm
03-8926-03	N-CHLOROACETYL-DL-ISOVAL m.w. 193.6 m.p. 158-160°C	1 & 5 gm
03-8627-03	N-CHLOROACETYL-L-LEU m.w. 207.65	1 & 5 gm
03-6864-03	CHLOROACETYL-L-MET [57230-01-0] m.w. 225.7	1 & 5 gm
03-8628-03	N-CHLOROACETYL-DL-NLE	1 & 5 gm
03-8927-03	N-CHLOROACETYL-L-PHE m.w. 241.67	1 & 5 gm
03-1720-03	N-CHLOROACETYL-DL-PHE m.w. 241.67	5 & 25 gm
03-8629-03	N-CHLOROACETYL-DL-SER m.w. 181.50	5 & 25 gm
03-1722-03	N-CHLOROACETYL-L-TRP [64709-57-5] m.w. 280.71	5 & 25 gm

03-4525-03	N-CHLOROACETYL-L-TYR [1145-56-8] m.w. 257.68	100 & 500 mg
03-8928-03	N-CHLOROACETYL-DL-VAL m.w. 193.53	1 & 5 gm
03-6977-06	N-(2-CHLOROETHYL)-N-ETHYL-2'-BROMOBENZYLAMINO HCl (DSP-4) (Adrenergic neuron blocking agent)	10 & 25 mg
03-3564-06	CHLOROGENIC ACID HEMIHYDRATE [327-97-9] m.w. 363.22 m.p. 208°C	100 & 500 mg
03-4523-03	L-a-CHLORO-d-GUANIDINE VALERIC ACID	1 & 5 gm
03-4831-06	4-CHLORO-3-NITROPHENYL SULFONE	250 & 500 mg
03-4526-03	L-p-CHLOROPHENYLALANINE [14173-38-8] m.w. 199.64	50 & 100 mg
03-1233-07	6-CHLOROPURINE [87-42-3]	1 & 10 gm
03-5690-06	CHLOROQUINE DIPHOSPHATE [50-63-5] m.w. 515.9	250 & 500 mg
03-7415-06	CHOLAMINE HCL	100 & 500 mg

CHOLESTERYL COMPOUNDS see: **STEROID LISTING**

03-7917-25	CHOLINE CHLORIDE 99% [67-48-1] m.w. 139.63 m.p. 303-305°C dec.	100 & 500 gm
03-7918-25	CHOLINE DIHYDROGEN CITRATE [77-91-8] m.p. 104-106°C	100 gm & 1 kg
1265-3	CHORIONIC GONADOTROPIN (HCG) HUMAN PREGNANT URINE m.w. prox. 100,000 Act: 2000-3000 iu/mg	5 & 25 mg
1266-3	CHORIONIC GONADOTROPIN (HCG) PREGNANT MARE URINE m.w. prox. 100,000 Act: 400 iu/mg	400 iu

03-8311-17	CHRYSIN DIMETHYLETHER (5,7-Dimethoxyflavone)	10 mg
03-0916-18	a-CHYMOTRYPSIN (Bovine pancreas) [9004-07-3] EC 3.4.21.1 Act:Min. 1000 USP U./mg.	250 mg & 1 gm
03-0920-18	CHYMOTRYPSINOGEN (Bovine pancreas) [9035-75-0] EC 3.4.21.1 5X cryst. Act. Native 7 NF U./mg.	250 mg
03-8215-06	CINCHONINE m.p. 258-260°C [118-10-5]	5 & 25 gm
03-3565-06	N-trans-CINNAMOYLIMIDAZOLE m.p. 133-135°C [1138-15-4]	1 & 10 gm

CIRCUMSPOROZOITE'S

03-6867-02	(ASN-PRO-ASN-ALA)₂ (Circumsporozoite Protein repetitive sequence)	1 mg
03-6868-02	(ASN-PRO-ASN-ALA)₃ (Circumsporozoite Protein repetitive sequence)	1 mg
03-9720-18	CITRATE LYASE (A.aerogenes) EC 4.1.3.6 Act:0.25 U./mg.	120 U
03-7919-25	CITRIC ACID [77-92-91] Anhydrous 99% m.w. 192.43 m.p. 153-154°C	250 gm & 1 kg
03-7057-17	CITRONELLOL [106-22-9] m.w. 156.27	500 mg
03-0818-03	L-CITRULLINE (Hepatic research) [372-75-8] m.w. 175.19 m.p. 220-221°C dec.	10 & 50 gm
03-4530-03	D-CITRULLINE , CHR pure m.w. 175.19 C:41.06 H:7.45 N:23.9 rot: -26° c=2 1NHcl	100 & 500 mg

03-8009-25	COBALAMINE CONCENTRATE [13408-78-1] 3000 ug. Vit. B12/gm	1 & 10 gm
03-8010-06	COBALT GLYCINE	5 & 25 gm

CODECARBOXYLASE see: **PYRIDOXAL-5-PHOSPHATE**

03-0878-07	COENZYME A , Free acid [85-61-2] m.w. 821.4	25 & 100 mg
03-9018-17	COLCHICINE [64-86-8] m.w. 399.45 m.p. prox. 155°C	500 mg
03-8011-17	COLCHICINE SALICYLATE	500 mg
03-0921-18	COLLAGENASE , CHR (C. histolyticum) EC 3.4.24.3 Act: 2000-3000 U./vial	1 vial
03-9022-17	DL-CONIINE HCL [51541-42-5] m.w. 163.69 m.p. 210°C	500 mg
03-9024-17	CONVALLATOXIN [508-75-8] m.w. 550.63 m.p. 220-230°C rot: -1° c=0.7 95% EtOH	100 mg
03-2592-06	COOMASSIE BLUE R (Brilliant Blue R250)	10 gm
03-1922-02	CORTICOTROPIN RELEASING FACTOR (CRF) Human, Rat (Ser-Glu-Glu-Pro-Pro-Ile-Ser-Leu-Asp-Leu-Asp-Leu-Thr-Phe-His-Leu-Leu-Arg-Glu-Val-Leu-Glu-Met-Ala-Arg-Ala-Glu-Gln-Leu-Ala-Gln-Gln-Ala-His-Ser-Asn-Arg-Lys-Leu-Met-Glu-Ile-Ile NH ₂)	0.1 & 0.5 mg
03-1921-02	CORTICOTROPIN RELEASING FACTOR (CRF) Ovine (Ser-Glu-Glu-Pro-Pro-Ile-Ser-Leu-Asp-Leu-Asp-Leu-Thr-Phe-His-Leu-Leu-Arg-Glu-Val-Leu-Glu-Met-Thr-Lys-Ala-Asp-Gln-Leu-Ala-Gln-Gln-Ala-His-Ser-Asn-Arg-Lys-Leu-Leu-Asp-Ile-Ala NH ₂)	0.1 mg

03-6874-02	Tyr CORTICOTROPIN RELEASING FACTOR (CRF) (Human, Rat) m.w. 4921.33	0.5 mg
03-0304-02	Tyr CORTICOTROPIN RELEASING FACTOR (CRF) Ovine	0.5 mg
03-1920-02	C-PEPTIDE Human (Arg-Arg-Glu-Ala-Glu-Asp-Leu-Gln-Val-Gly-Gln-Val-Glu-Leu-Gly-Gly-Gly-Pro-Gly-Ala-Gly-Ser-Leu-Gln-Pro-Leu-Ala-Leu-Glu-Gly-Ser-Leu-Gln-Lys-Arg)	0.5 mg
03-6876-02	Tyr C-PEPTIDE Human	0.5 mg

CDF PEPTIDES

03-1830-02	N-CARBOMETHOXYCARBONYL-D-PRO-D-PHE BENZYLESTER	10 mg
03-0824-04	CREATINE monohydrate (Hepatic research) [372-75-8] m.w. 149.15	50 & 100 gm
03-0825-03	CREATINE PHOSPHATE DISODIUM SALT HEXAHYDRATE m.w. 363.13	1 & 5 gm
03-6622-17	CURCUMINE (C.longa tubers) [458-37-7] m.w. 342.26 m.p. 181-183°C	100 & 250 mg
03-8004-06	DL-CYANIDINE	10 & 25 mg

Cyanocobalamine see: **Vitamin B12**

03-6643-02	CYCLO (7-AMINOHEPTANOYL-PHE-D-TRP-LYS-O-BENZYL-THR) acetate) (Somatostatin, cyclo)	1 mg
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a-CYCLO DEXTRIN / b-CYCLO DEXTRIN see: **DEXTRIN**

03-8632-03	CYCLOLEUCINE m.w. 129.16 m.p. 325-330°C	1 & 5 gm
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03-5475-02	CYCLO(L-ALA-ALA) m.w. 142.16	50 & 100 mg
03-5476-02	CYCLO(L-ALA-GLY)	50 & 100 mg
03-6965-02	CYCLO(b-ALA-GLY-b-ALA-GLY)	10 & 25 mg
03-6966-02	CYCLO(L-ALA-L-HIS)	25 & 50 mg
03-5477-02	CYCLO(L-ALA-SER)	50 & 100 mg
03-5479-02	CYCLO(GLY-L-HIS)	50 & 100 mg
03-6968-02	CYCLO(L-ASP-GLY)	50 & 100 mg
03-6969-02	CYCLO(L-GLU-L-GLU)	10 & 25 mg
03-6970-02	CYCLO(GLY-L-GLN)	50 & 100 mg
03-6971-02	CYCLO(GLY-L-LEU)	25 & 50 mg
03-6877-02	CYCLO(GLY-L-PHE) m.w. 204.25	50 & 100 mg
03-6972-02	CYCLO(GLY-L-TYR)	50 & 100 mg
03-6973-02	CYCLO(D-LEU-D-PRO)	25 & 50 mg
03-6974-02	CYCLO(L-MET-L-MET)	50 & 100 mg
03-6878-02	CYCLO(L-PHE-L-PHE)	50 & 100 mg
03-6976-02	CYCLO(L-TRP-L-TRP)	50 & 100 mg
03-6879-02	CYCLO(L-SER-L-SER)	50 & 100 mg
03-6880-02	CYCLO(L-VAL-L-VAL)	25 & 50 mg
03-4531-03	DL-2-CYCLOBUTYL-2-PHENYLGLYCINE	1 & 5 gm

a and b CYCLODEXTRIN see: **DEXTRIN**

03-8312-17	CYMARIN (K-Strophanthin a) 95-100% m.w. 548.65 m.p. 138-148°C	25 mg
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CD4 PEPTIDE FRAGMENTS

20-1831-02	THR-TYR-ILE-CYS(Bzl)-GLU-VAL-GLU-ASP-GLN-LYS-GLU-GLU	1 mg
20-1832-02	THR-TYR-ILE-CYS(Bzl)-GLU(Bzl)-VAL-GLU-ASP-GLN-LYS-GLU-GLU	1 mg
03-0858-03	CYSTEAMINE HCL [156-57-0] m.w. 113.61 m.p. 66-68°C	100 gm
03-8944-03	CYSTEAMINE-S-PHOSPHORIC ACID , Free base m.w. 157.14 m.p. 151-153°C	100 mg & 1 gm
03-8267-03	CYSTEAMINE-S-PHOSPHORIC ACID , Monosodium salt m.w. 177.13	100 mg & 1 gm
03-8634-03	D-CYSTEINE HCL [32443-99-5] m.w. 157.62 m.p. 175-178°C	100 & 500 mg
03-0820-03	L-CYSTEINE monohydrochloride.H ₂ O (Cardiac/Radiation research) [7048-04-6] m.w. 175.63	100 & 250 gm
03-4535-03	L-CYSTEINE BENZYL TOSYLATE m.p. 198-200°C	50 & 100 mg
03-1419-02	L-CYSTEINYL GLYCINE 98% m.w. 178.12	5 & 25 gm
03-8636-03	L-CYSTEINE SULFINIC ACID [1115-65-7] m.w. 153.17 m.p. 152-153°C dec.	100 & 500 mg
03-4536-03	L-CYSTINE ETHYLESTER HCl	100 & 250 mg
03-8637-03	D-CYSTINE [349-46-2] m.w. 240.31	100 & 500 mg
03-6384-02	CYSTINLY-ALA-ALA-GLY-VAL-CYSTINE-OMe.HCOOH m.w. 580.7 C:43.15 H:6.19 N:14.22 S:11.00	10 & 50 mg
03-7829-03	CYS (Bzl)-7-AMIDO-4-METHYLCOUMARIN (Cystyl aminopeptidase substrate)	10 mg

03-7831-03	(CYS-b-NAPHTHYLAMIDE)₂ (Cystyl aminopeptidase substrate)	100 & 250 mg
03-7832-03	(CYS-p-NITROANILIDE)₂ (Cystyl aminopeptidase substrate)	25 & 50 mg
03-6379-03	L-CYSTINYL-CYSTINYL-OMe HCL m.w. 222.3 C: 31.03 J: 4.85 N: 10.08 S: 23.18	25 & 100 mg
06-7163-02	CYS-GLN-ASP-SER-GLU-THR-ARG-THR-PHE-TYR (Fibronectin Related Peptide)	1 mg
03-3199-02	CYS-GLY-TYR-GLY-PRO-LYS-LYS-LYS-ARG-LYS-VAL-GLY-GLY (SV40 Nuclear transport signal peptide analog) m.w. 1377.9	1 mg
03-2770-02	CYST-GLY-ASN-LEU-SER-THR-CYST-MET-LEU-GLY-THR-TYR-THR- GLN-AS-PHE-ASNLYS-PHE-HIS-THR-PHE-PRO-GLN-THR-ALA-ILE- GLY-VAL-GLY-ALA-PRO NH₂ (Calcitonin, Human) m.w. 3417.9 HPLC: 99+%	1 & 2.5 mg
	CYST-TYR-PHE-GLN-ASN-CYST-PRO-ARG-GLY NH₂ see: VASOPRESSIN (ARG)	
	CYST-TYR-PHE-GLN-ASN-CYST-PRO-LYS-GLY NH₂ see: VASOPRESSIN (LYS)	
03-0879-07	CYTIDINE, Anhydrous cryst. 99% [65-46-3] m.w. 243.2	1 & 5 gm
03-0816-07	CYTIDINE-2',3'-CYCLIC PHOSPHATE Barium m.w. 408.9 (96-100%)	100 & 250 mg
03-0881-07	CYTIDINE-5'-DIPHOSPHATE Sodium [34393-59-4] m.w. 456	100 & 500 mg
03-0886-07	CYTIDINE-5'-TRIPHOSPHATE Disodium	100 & 500 mg
03-9028-17	CYTISINE [485-35-8] m.w. 190.24 m.p. 152-153°C	50 & 100 mg
03-4540-18	CYTOCHALASIN D, cryst. CHR [22144-77-0] m.w. 507.6 m.p. 267-271°C	1 mg

- 03-4541-18 **CYTOCHALASIN 3**, cryst. CHR 1 mg
[36011-19-5] m.w. 495.6 m.p. 206-209°C
- 03-8327-18 **CYTOCHROME C** (Horse heart) 100 & 500 mg
[9007-43-6] m.w. 12,500 Cyt.C:80% Cyt.red:3%

D

04-9643-03	DANSYL-g-AMINO BUTYRIC ACID CHA salt m.w. 437.60	100 & 250 mg
04-9646-03	DANSYL-L-ASP DCHA salt m.w. 547.72	100 & 250 mg
04-3825-03	monoDANSYL CYSTAMINE 1/2 FUMARATE m.w. 459.6 m.p. 119-121°C	10 & 25 mg
04-2768-03	DANSYL-L-CYSTEINE DCHA salt m.w. 535.8 C:59.86 H:7.68 N:7.58 S:12.32	100 & 250 mg
04-9648-03	DANSYL-L-GLU dcha salt [1101-67-3] m.w. 561.75	100 & 250 mg
04-9660-03	DANSYL-L-PHE m.w. 483.64	100 & 250 mg
04-3827-03	monoDANSYL THIA CADAVARINE 1/2 FUMARATE m.w. 427.5 m.p. 162-165°C	10 & 25 mg
04-8658-06	DECYL PYRAZOLONE	1 & 5 gm

DEFIBRIZYME see: **ANTI-COAGULANT ENZYME**

04-4029-06	DEHYDROACETIC ACID m.w. 168.14	50 & 100 gm
04-7921-25	DEHYDROASCORBIC ACID [490-83-5] m.w. 174.11	100 mg & 1 gm

7-DEHYDROCHOLESTEROL see: **VITAMIN D3**

04-9029-17	DEMISSIDINE (Solanine D) [474-08-8] m.w. 399.66 m.p. prox. 218°C	25 mg
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04-1461-07	2'-DEOXYADENOSINE , Cryst. [958-09-8] m.w. 269.2	1 & 5 gm
04-1462-07	5'-DEOXYADENOSINE (99%) [4754-39-6] m.w. 251.24 UV(pH=1):max.257 nm; (pH=11):max.259nm	10 & 25 mg
04-5695-04	3-DEOXY-D-ERYTHROSE syrup m.w. 134.1	25 mg
04-4219-04	2-DEOXY-D-GALACTOSE (Tumor inhibition) m.w. 164.16	25 & 100 mg
04-5696-04	6-DEOXY-D-GLUCOSE (Quinovose) [154-17-6] m.w. 164.16	50 & 100 mg
04-1477-07	2'-DEOXYINOSINE-5'-PHOSPHATE Sodium [14999-52-1] m.w. 394.2	100 & 250 mg
04-5697-04	2-DEOXY-D-RIBOHXOPYRANOSE m.w. 164.2	25 & 100 mg
04-1390-18	DEOXYRIBONUCLEIC ACID (Calf thymus) [9007-49-2] sodium salt highly polymerized N: 13% P: 7%	100 & 500 mg
04-1343-04	2-DEOXY-D-RIBOSE [533-67-5] m.w. 134.13	1 & 10 gm
04-4276-07	2'-DEOXYTHYMIDINE-5'-p-NITROPHENYL PHOSPHATE Amm. m.w. 460.3	25 mg
04-5698-04	5-DEOXY-D-XYLOFURANOSE syrup	100 mg

DEMORPHIN see: **TYR-D-ALA-PHE-GLY-TYR-PRO-SER NH₂**

04-4832-06	DESOXYPIKAKONE	250 & 500 mg
04-3267-25	DL-DESTHIOBIOTIN [533-48-2] m.p. 160-161°C	100 & 250 mg

DEXTRAN(s) and POLYSULFONATES see separate section

04-1345-04	DEXTRIN (Bacteriological) [9004-53-9]	100 gm & 1 kg
04-0854-04	a-cyclo DEXTRIN (Schardinger a-dextrin) m.w. 97.28	1 & 10 gm
04-0855-04	b-cyclo DEXTRIN (Schardinger b-dextrin) m.w. 1135.0	1 & 10 gm

p-TOSYL-b-CYCLODEXTRIN see: **TOSYL**

04-1346-04	DEXTROSE anhydrous purified ACS m.w. 180.16	1 & 10 lb
04-1348-04	DEXTROSE monohydrate, USP	1 & 10 lb
04-3357-06	DIACETONE MANNITOL	1 & 5 gm
04-8012-06	2,5-DIAMINO-4,6-DIHYDROXYPYRIMIDINE SULFATE [52502-66-6] m.w. 191.18	500 mg & 1 gm
04-1242-06	1,8-DIAMINO-OCTANE DiHCl [7613-16-3]	5 & 25 gm

1,5-DIAMINOPENTANE see: **CADAVARINE DiHCL**

04-7440-07	5,6-DIAMINOURACIL HYDROSULFITE	1 & 10 gm
04-1349-04	DIASTASE U.S.P. [9000-92-4]	100 gm & 1 kg
04-7402-06	2,3-DIBROMO-3-PHENYLPROPIOPHENONE	1 & 5 gm
04-5481-02	3,5'-DIBROMO-TYR-GLY-GLY-PHE-LEU (Dibromo Leu Enkephalin)	5 mg
05-5482-02	(3,5-Dibromo-Tyr¹ MET-ENKEPHALIN (3,5-Dibromo-Tyr-Gly-Gly-Phe-Met)	5 mg

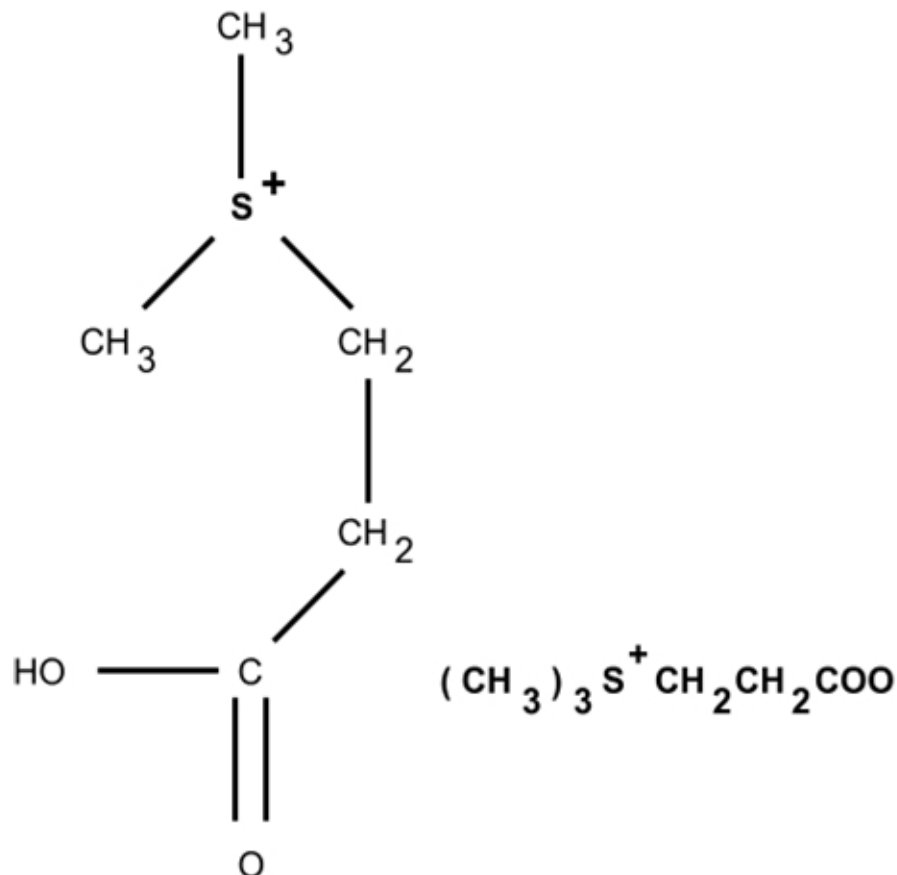
04-1246-06	DICETYL PHOSPHATE (Dihexadecyl Phosphate) [2197-63-9] m.w. 546.88 m.p. 72-72.5°C	5 & 25 gm
04-4543-03	DICHLOROACETYL-DL-PHE	500 mg & 1 gm
04-8260-06	2,6-DICHLOROINDOPHENYL ACETATE [24857-20-3]	100 & 250 mg
04-1259-06	(+) DIETHYL-L-TARTRATE [87-91-2] m.w. 206.19 b.p. 28°C	100 ml
04-8661-06	DIFLUORO DINITRO DIPHENYL SULFONE [312-3-0-1]	1 & 10 gm
04-5014-19	DIGITONIN m.w. 1229.30 m.p.235-240°C rot: -48° c=2 75% AA	1 & 5 gm
04-8261-04	(+)-DIGITOXOSE m.w. 148.16	100 & 250 mg
04-8206-04	DIGITOXIGENIN-mon-DIGITOXOSIDE	5 mg
DIHEXADECYL PHOSPHATE see: DICETYL PHOSPHATE		
04-1545-07	5,6-DIHYDRODEOXYURIDINE , CHR Pure m.w. 230.22 m.p.136-138°C	10 & 25 mg
04-2818-17	DIHYDROFISETIN [20725-03-5] m.w. 288.12 m.p.215-219°C	100 & 250 mg
04-6151-21	DIHYDROSTREPTOMYCIN SULFATE [5490-27-7] prox. 800 mcg/mg	10 & 50 gm
04-1546-07	5,6-DIHYDROTHYMIDINE , CHR pure [696-04-8] m.w. 244.25 m.p.125-127°C	25 & 100 mg
04-6623-17	2,4-DIHYDROXYBENZALDEHYDE (b-Resorcylaldehyde [95-01-2] m.p.135-136°C	250 mg & 1 gm
04-9820-16	9,10-DIHYDROXY OLEYL ALCOHOL	5 & 25 gm

L-3(3,4-DIHYDROXY PHENYLALANINE) see: **L-DOPA**

04-9821-16	9,10-DIHYDROXY STEARIC HYDRAZIDE	500 mg & 1 gm
04-9822-16	9,10-DIHYDROXY STEARIC ACID ETHYLESTER	100 & 500 mg
20-3302-07	4,6-DIHYDROXY-2-THIOPYRIMIDINE (2-Thiobarbituric acid)	1 & 5 gm
04-5483-02	3,5'-DI IODO-TYR-ALA-GLY-GLY	25 mg
04-1350-04	1,2:3,5-DI-O-ISOPROPYLIDENE-a-D-APIOSE m.w. 230.26	500 mg & 1 gm
04-1351-04	1,2:3,5-DI-O-ISOPROPYLIDENE-D-GLUCOFURANOSE m.w. 260.28	10 & 50 gm
04-1352-04	1,2:3,5-DI-O-ISOPROPYLIDENE-D-XYLOFURANOSE [20881-04-3] m.w. 232.26	10 & 50 gm
04-1417-06	2,3-DIMETHOXYCINNAMIC ACID (99%) m.w. 208.2	1 & 5 gm
04-9112-07	N6,N6-DIMETHYLADENOSINE , CHR pure m.w. 295.30 m.p. 181-183°C	10 & 25 mg
04-4030-06	b,b-DIMETHYLACRYLIC ACID m.w. 100.42	1 & 10 gm
04-3363-06	DIMETHYL DIBROMO ADIPATE	10 & 50 gm
04-3260-25	N,N-DIMETHYLGLYCINE , Vitamin B15 (Pangamic acid) [11006-56-7]	1 & 10 gm
04-0795-06	N,N-DIMETHYL-p-PHENYLAZOANILINE	500 mg

DMPT

Dimethyl-B-Propiothetin (DMPT) is an algae metabolite. It reacts with cell-permeable I⁻ to produce MeI and OH⁻ to form ME₂S. DMPT is a source of ubiquitous methyl halides excreted into the global environment. It plays a critical role in osmo-regulation in algae, occurring in large quantities on a global basis. Fresh water marine and estuarine phytoplankton contain DMPT as well. Using algae or fungus can be an inexpensive means of generating methyl iodide, i.e., ponds/lagoons.



References:

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2. Thayer and Brinckman, *Adv. in Organometallic Chemistry*, F.G.A. Stone and West, Eds., Vol. 20, N.Y. Acad. Press, pp 313-56(1982)
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4. Westwo, G., *Acta Chem. Scand*, 20: 21131-37 (1966) Denaturation of methylmercury compounds in foodstuffs
5. Craig and Brinckman, *Organometallic Compounds in the environment* P.J. Craig, Ed., Longman House, London, p.1-61 (1986)

04-8013-06 **DIMETHYL-b-PROPIOTHETIN**

50 & 100 mg

(DMSP) (DMPT) (Dimethylsulfonyl propionate) m.w. 170.6

04-3301-07	4,6-DIMETHYL-2-THIOPYRIMIDINE	1 & 10 gm
04-7474-03	2,4-DINITRO-1-NAPHTHYL-p-TOSYLATE	1 & 10 gm
04-7648-06	a-DINITROPHENOL 99% m.w. 184.11 m.p. 111-113°C	1 & 5 gm
04-9700-03	DINITRO PHENYLACETIC ACID [643-43-6]	10 & 50 gm
04-5778-06	N,N-DINITROPIPERAZINE [4164-37-8] m.w. 176.14 m.p. 215-217°C	500 mg & 1 gm
5026-19	DIOSGENIN , Highly purified m.w. 414.63 m.p. 214-215°C rot: -132° Chlf	100 & 250 mg
04-7420-03	1,4-DIPHENYL BUTANE [1083-56-3]	100 & 250 mg
04-2423-06	N,N'-DIPHENYL-1,4-PHENYLENE DIAMINE [27137-31-1]	1 & 10 gm
04-7470-06	DIPHENYLPROPIOPHENONE	1 & 5 gm
04-8655-03	DISODIUM TYROSINE , tech	5 & 25 gm
04-9520-03	DITHIOERYTHRITOL m.w. 168.28 [6892-68-8]	250 mg & 1 gm
04-1340-03	DITHIOTHREITOL m.w. 154.24 m.p. 42-43°C	1 & 10 gm
04-8657-06	DITHYMINYL MERCURY	500 mg & 1 gm
04-3576-03	DNP-L-Alanine m.w. 253.17 abs.max. mu 360-365	100 mg & 1 gm
04-1733-03	DNP-b-Alanine m.w. 253.17 abs.max. mu 360-365	100 mg & 1 gm
04-1752-03	DNP-DL-Glutamic acid m.w. 313.22 abs.max. mu 360-365	100 mg & 1 gm
04-1753-03	DNP-Glycine m.w. 241.16 abs.max. mu 325-330	100 mg & 1 gm

04-4031-03	N,N-di-DNP-L-Lysine	100 mg & 1 gm
04-1764-03	DNP-L-Methionine sulfone m.w. 347.30	100 mg & 1 gm
04-1773-03	DNP-Pipecolic acid m.w. 295.25 abs.max. mu 390-395	100 mg & 1 gm
04-3592-03	DNP-L-Tryptophan m.w. 370.32 abs.max. mu 360-365	100 mg & 1 gm
04-7827-02	DNP-PRO-GLN-GLY-ILE-ALA-GLY-GLN-D-ARG (Collagenase substrate)	5 mg
04-7828-02	DNP-PRO-LEU-GLY-CYS-METHYLESTER-HIS-ALA-D-ARG NH₂ (Collagenase substrate)	1 mg
04-7899-02	DNP-PRO-LEU-GLY-LEU-TRP-ALA-D-ARG NH₂ (Punctuated metallo protein kinase substrate)	1 mg
04-3596-03	DNP_{Py}-DL-Alanine m.w. 256.29	100 & 250 mg
04-3603-03	DNP_{Py}-Glycine m.w. 242.16	100 & 250 mg

E**EAE Nonapeptide** see: **Phe-Ser-Trp-Gly-Ala-Glu-Gly-Gln-Arg****EDTA Chelating Agents** see separate section

05-6624-17	ELLAGIC ACID , Pure m.w. 302.19 m.p. 360°C+	1 & 5 gm
05-6625-17	EMBELIN (E.ribes seeds) [550-24-3] m.w. 294.39 m.p. 142-143°C	100 & 250 mg
05-9032-17	EMETINE DIHCL [316-42-7] m.w. 553.56 m.p. 235-255°C	1 gm

ENDORPHINS

05-6091-02	a-ENDORPHIN (b-Lipotropin 61-76) (Tyr-Gly-Gly-Phe-Met-Thr-Ser-Glu-Lys-Ser-Gln-Thr-Pro-Leu-Val-Tyr)	1 mg
05-2234-02	b-ENDORPHIN (Human) (b-Lipotropin 61-91) [5988-17-1]	1 mg
05-6093-02	b-ENDORPHIN 1-27 (Human)	1 mg
05-6092-02	b-ENDORPHIN (Camel) (b-Lipotropin 61-91)	1 mg
05-6094-02	g-ENDORPHIN (b-Lipotropin 61-77)	1 mg

ENKEPHALIN, Fragments & Analogs

20-7017-02	LEU-ENKEPHALIN (L-Tyr-Gly-Gly-Phe-Leu) m.w. 555.61	5 mg
02-1654-02	BOC-LEU ENKEPHALIN (N-a-t-BOC-L-Tyr-Gly-Gly-Phe-Leu)	10 & 25 mg
20-6394-02	Sulfated LEU-ENKEPHALIN (L-Tyr(SO ₃ H)-Gly-Gly-Phe-Leu-NH ₃) m.w. 652.7 (98% by HPLC)	5 & 10 mg
05-6889-02	LEU-ENKEPHALIN NH₂ (Tyr-Gly-Gly-Phe-Leu-NH ₂)	5 mg
05-6890-02	LEU-ENKEPHALIN ARG (Dynorphin 1-6) (Tyr-Gly-Gly-Phe-Leu-Arg)	1 mg
07-1884-02	ENKEPHALIN (Gly-Gly-Phe-Leu) (DES Tyr ² , Leu ⁴) m.w. 392.45	25 & 50 mg
04-5481-02	Dibromo LEU ENKEPHALIN (3,5'-Dibromo-Tyr-Gly-Gly-Phe-Leu)	5 mg
02-1653-02	BOC-MET ENKEPHALIN (N-a-t-BOC-L-Tyr-Gly-Gly-Phe-Met) m.w. 673.85	10 & 25 mg
20-7374-02	(D-ALA₂) MET-ENKEPHALIN (L-Tyr-D-Ala-Gly-Phe-Met) m.w. 587.71 C:57.0 H:11.95 S:5.3	10 & 25 mg
20-7376-02	(D-ALA²,O-ol⁶) MET-ENKEPHALIN (L-Tyr-D-Ala-Gly-Phe-Met(O)-ol C:55.8 H:6.51 N:11.1 S:5.1	10 & 25 mg
20-7370-02	(D-ALA²-ol)-MET ENKEPHALIN (L-Tyr-D-Ala-Gly-Phe-Met-OL.CH ₃ COOH) m.w. 633.78 C:57.2 H:6.86 N:11.2 S:5.2	10 & 25 mg
05-6891-02	MET-ENKEPHALIN ARG ARG (Tyr-Gly-Gly-Phe-Met-Arg-Arg)	1 mg
05-5482-02	(3,5-Dibromo-Tyr¹ MET-ENKEPHALIN (3,5-Dibromo-Tyr-Gly-Gly-Phe-Met)	5 mg

20-3708-02	ENKEPHALIN 1-3 (L-Tyr-Gly-Gly.H ₂ O) [21778-69-3] m.w. 313.3 C: 50.12 H: 6.12 N: 13.18	50 & 100 mg
05-7698-02	PRE-PROENKEPHALIN (128-140) BOVINE (Gly-Gly-Leu-Val-Leu-Gly-Leu-Arg-Tyr-Gly-Phe-Met) Isolated from ovine adrenal chromaffin granules	1 mg
05-2593-06	EOSIN BLUE SHADE C.I. 45400	1 & 5 gm
05-6894-02	EPIDERMAL GROWTH FACTOR (Mouse)	0.05 mg
05-6895-02	EPIDERMAL GROWTH FACTOR FRAGMENT (S-Acetamidomethyl-Cys20,31) EGF 20-31	1 mg
05-7111-02	EPIDERMAL GROWTH FACTOR RECEPTOR PEPTIDE (Human)	1 mg
05-0906-02	EPIDERMAL GROWTH FACTOR (Human) REC	0.05 mg
05-4222-04	DL-epi-INOSOSE-2 m.w. 178.1 m.p. 198-201°C	25 & 50 mg

ENZYME SUBSTRATES (listed by System)

ACID and ALKALINE PHOSPHATASE

02-7730-03 **5-BROMO-4-CHLORO-3-INDOLYL-PHOSPHATE-p-TOLUIDINE** 10 mg

AMINOPEPTIDASE A

01-0107-02 **L-ASP-b-NAPHTHYLAMIDE** 25 mg

07-7731-03 **L-GLU-4-METHOXY-b-NAPHTHYLAMIDE** 10 mg

07-2516-02 **L-a-GLU-b-NAPHTHYLAMIDE** 25 mg

AMINOPEPTIDASE B

01-5444-03 **L-ARG-7-AMIDO-4-METHYLCOUMARIN HCl** 10 mg

01-0108-03 **L-ARG-b-NAPHTHYLAMIDE HCl** 25 mg

AMINOPEPTIDASE M

01-7733-03 **L-ALA-7-AMIDO-4-METHYLCOUMARIN** 10 mg

01-7736-03 **L-ARG-b-NAPHTHYLAMIDE HCl** 10 mg

01-7737-02 **GLY-LEU-GLY-GLY** 25 mg

12-8476-03 **L-LEU-7-AMIDO-4-METHYLCOUMARIN (free base)** 10 mg

12-4312-03 **L-LEU-b-NAPHTHYLAMIDE HCl** 100 mg

16-7738-03 **L-PHE-4-METHOXY-b-NAPHTHYLAMIDE** 10 mg

ANGIOTENSIN I CONVERTING ENZYME

02-7739-02 **N-BENZOYL-PHE-ALA-PRO** 10 mg

06-5493-02 **3-(2-FURYL)-ACRYLOYL-PHE-GLY-GLY** 25 mg

08-3000-02 **HIPPURYL-HIS-LEU MONOHYDRATE** 25 mg

03-8468-02 **N-a-CBZ-PHE-HIS-LEU** 25 mg

CA²⁺/CALMODULINDEPENDENT PROTEINKINASE

16-7740-02 **PRO-LEU-ALA-ARG-THR-LEU-SER-VAL-ALA-GLY-LEU-PRO-GLY-LYS-LYS** 1 mg

CALPAIN

02-7741-02 **BOC-VAL-LEU-LYS-7-AMIDO-4-METHYLCOUMARIN** 10 mg

19-7742-02 **SUCCINYL-LEU-LEU-VAL-TYR-7-AMIDO-4-METHYLCOUMARIN** 5 mg

cAMP-DEPENDENT PROTEINKINASE

01-7743-02 **ARG-ARG-LEU-SER-SER-LEU-ARG-ALA** 1 mg

07-7744-02 **GLY-ARG-BLY-LEU-SER-LEU-SER-ARG** 1 mg

12-5285-02 **LEU-ARG-ARG-ALA-SER-LEU-GLY** 1 mg

CARBOXYPEPTIDASE A

08-2927-02 **HIPPURYL-L-PHE** 25 mg

03-0848-02 **CBZ-GLY-L-PHE** 100 mg

06-7758-02 **3-(2-FURYL)-ACRYLOYL-PHE-PHE** 10 mg

CARBOXYPEPTIDASE B

08-2923-02 **HIPPURYL-L-ARG** 25 mg

08-3472-02 **HIPPURYL-L-LYS** 25 mg

CARBOXYPEPTIDASE N

06-7759-02 **3-(2-FURYL)-ACRYLOYL-ALA-ARG** salt 10 mg

CARBOXYPEPTIDASE Y

01-0127-03	N-ACETYL-L-PHE ETHYLESTER	100 mg
01-0130-03	N-ACETYL-L-TRP ETHYLESTER	100 mg
01-0131-03	N-ACETYL-L-TYR ETHYLESTER	100 mg
03-3487-02	CBZ-L-ALA-L-PHE	25 mg
03-4500-02	CBZ-L-LEU-L-PHE	25 mg
03-3535-02	CBZ-L-PHE GLY	100 mg
03-3537-02	CBZ-L-PHE-L-LEU	100 mg

CATHEPSIN A

03-0844-02	CBZ-L-GLU-L-TYR	100 mg
03-1700-02	CBZ-L-PHE-L-ALA	100 mg
03-4509-02	CBZ-L-PHE-L-PHE	50 mg
03-3539-02	CBZ-L-PHE-L-PRO	100 mg

CATHEPSIN B

02-0602-03	N-a-BENZOYL-DL-ARG-b-NAPHTHYLAMIDE HCl	100 mg
02-0603-03	N-BENZOYL-DL-ARG-p-NITROANILIDE	100 mg
03-5494-02	N-a-CBZ-L-ARG-ARG-b-NAPHTHYLAMIDE .2HCl	50 mg
03-9118-02	CBZ-L-PHE-ARG-7-AMIDO-4-METHYLCOUMARIN	100 mg

CATHEPSIN C

07-5258-02	GLY-GLY-b-NAPHTHYLAMIDE HCl	25 mg
07-5259-02	GLY-L-PHE-4-METHOXY-b-NAPHTHYLAMIDE	25 mg

CATHEPSIN D

07-7760-02	BENZOYL-ARG-GLY-PHE-PHE-LEU-4-METHOXY-b-NAPHTHYLAMIDE	10 mg
02-7761-02	BENZOYL-ARG-GLY-PHE-PHE-PRO-4-METHOXY-b-NAPHTHYLAMIDE	10 mg

CATHEPSIN G

02-3406-03	N-BENZOYL-DL-PHE-b-NAPHTHYLESTER	100 mg
19-7762-02	SUCCINYL-ALA-ALA-PRO-MET-p-NITROANILIDE	10 mg
19-5290-02	SUCCINYL-PHE-LEU-PHE-p-NITROANILIDE	10 mg
19-7764-02	SUCCINYL-VAL-PRO-PHE-p-NITROANILIDE	10 mg

CATHEPSIN H

01-5444-02	L-ARG-7-AMIDO-4-METHYLCOUMARIN HCl	10 mg
01-0106-03	L-ARG-b-NAPHTHYLAMIDE HCl	25 mg
02-0603-03	N-BENZOYL-DL-ARG-p-NITROANILIDE	100 mg
02-0602-03	N-BENZOYL-DL-ARG-b-NAPHTHYLAMIDE HCl	100 mg

CATHEPSIN L

03-7765-02	CBZ-L-LYS-p-NITROPHENYLESTER	10 mg
03-9118-02	CBZ-L-PHE-ARG-7-AMIDO-4-METHYLCOUMARIN	5 mg

CYMASE

02-0619-03	N-BENZOYL-L-TYR ETHYLESTER	250 mg
19-5290-02	N-SUCCINYL-L-PHE-LEU-PHE-p-NITROANILIDE	10 mg

CHYMOSIN

12-7789-02	LEU-SER-p-NITRO-PHE-NLE-ALA-LEU-METHYLESTER TFA salt	5 mg
12-5116-02	LEU-SER-PHE-NLE-ALA-ILE-METHYLESTER TFA salt	5 mg

CHYMOTRYPSIN

01-7791-03	ACETYL-DL-PHE-b-NAPHTHYLESTER	100 mg
01-7792-03	ACETYL-L-PHE-p-NITROANILIDE	100 mg
01-0130-03	N-ACETYL-L-TRP ETHYLESTER	100 mg
01-0131-03	N-ACETYL-L-TYR ETHYLESTER	100 mg
01-5428-03	L-ALA-ALA-PHE-7-AMIDO-4-METHYLCOUMARIN TFA salt	10 mg
02-3406-03	N-BENZOYL-DL-PHE-b-NAPHTHYLESTER	100 mg
02-0619-03	N-BENZOYL-L-TYR ETHYLESTER	250 mg
07-6612-02	GLUTARYL-ALA-ALA-PHE-b-NAPHTHYLAMIDE	10 mg
07-1567-02	GLUTARYL-ALA-ALA-PHE-4-METHOXY-b-NAPHTHYLAMIDE	5 mg
07-8679-03	GLUTARYL-L-PHE-p-NITROANILIDE	100 mg
07-8469-03	GLUTARYL-L-PHE-7-AMIDO-4-METHYLCOUMARIN	10 mg

COAGULATION FACTOR IXa

01-7791-03	BOC-GLU-(OBzl)-GLY-ARG-7-AMIDO-4-METHYLCOUMARIN HCl	10 mg
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COAGULATION FACTOR Xa

02-5461-02	BOC-ILE-GLU-GLY-ARG-7-AMIDO-4-METHYLCOUMARIN salt	5 mg
02-7801-03	BOC-LYS-METHYLESTER acetate	100 mg

COAGULATION FACTOR XIa

02-7803-02	BOC-GLY(OBzl)-ALA-ARG-7-AMIDO-4-METHYLCOUMARIN	10 mg
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COAGULATION FACTOR XIIa

02-7862-02	BOC-GLN-GLY-ARG-7-AMIDO-4-METHYLCOUMARIN HCl	10 mg
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COAGULATION FACTOR B-XIIa

01-5407-02	ACETYL-PHE-ARG ETHYLESTER acetate	25 mg
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COLLAGENASES

03-1690-02	CBZ-GLY-L-PRO-LEU-GLY-PRO	10 mg
04-7827-02	DNP-PRO-GLN-GLY-ILE-ALA-GLY-GLN-D-ARG	5 mg
04-7828-02	DNP-PRO-LEU-GLY-CYS(Me)-HIS-ALA-D-ARG NH₂	1 mg

CYSTYL AMINOPEPTIDASE

03-7829-03	CYS(bzl)-7-AMIDO-4-METHYLCOUMARIN	10 mg
03-7831-03	(CYS-b-NA)₂	100 mg
03-7832-03	(CYS-p-NA)₂	25 mg

DIPEPTIDYL AMINOPEPTIDASE II

12-8479-02	LYS-ALA-b-NAPHTHYLAMIDE	10 mg
12-5286-02	LYS-PRO-4-METHOXY-b-NAPHTHYLAMIDE .2HCl	10 mg

DIPEPTIDYL AMINOPEPTIDASE III

01-5962-02	ARG-ARG-7-AMIDO-4-METHYLCOUMARIN .3HCl	10 mg
01-5961-02	ARG-ARG-b-NAPHTHYLAMIDE .3HCl	10 mg

DIPEPTIDYL AMINOPEPTIDASE IV

01-7851-02	ALA-PRO-p-NITROANILIDE HCl	25 mg
07-5260-02	GLY-PRO-4-METHOXY-b-NAPHTHYLAMIDE	25 mg
07-5261-02	GLY-L-PRO-b-NAPHTHYLAMIDE	25 mg
12-5286-02	LYS-PRO-4-METHOXY-b-NAPHTHYLAMIDE .2HCl	10 mg

ELASTASE

01-5400-02	α-N-ACETYL-L-ALA-ALA-ALA-p-NITROANILIDE	25 mg
01-5401-02	ACETYL-ALA-ALA-PRO-ALA-7-AMIDO-4-METHYLCOUMARIN	10 mg
01-0943-02	ALA-ALA-ALA-METHYLESTER acetate	25 mg
02-5455-02	BOC-ALA-ALA-p-NITROANILIDE	25 mg
02-5456-02	BOC-ALA-ALA-PRO-ALA-p-NITROANILIDE	10 mg
07-8472-02	GLUTARYL-ALA-ALA-PRO-LEU-p-NITROANILIDE	10 mg

ESTERASES

02-7867-03	5-BROMO-4-CHLORO-3-INDOLYL acetate	50 mg
02-7868-03	5-BROMO-6-CHLORO-3-INDOLYL acetate	100 mg

FURIN

02-7869-02	BOC-ARG-VAL-ARG-ARG-7-AMIDO-4-METHYLCOUMARIN	5 mg
16-7870-02	PYROGLU-ARG-THR-LYS-ARG-7-AMIDO-4-METHYLCOUMARIN	1 mg

 β -GALACTOSIDASE

02-7871-03	5-BROMO-4-CHLORO-3-INDOLYL-β-D-FUCOSIDE	5 mg
02-7872-03	5-BROMO-3-INDOLYL-β-D-GALACTOSIDE	1 mg

 β -GLUCOSIDASE

02-7873-03	5-BROMO-4-CHLORO-3-INDOLYL-β-D-GLUCOSIDE	10 mg
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 γ -GLUTAMYL TRANSFERASE

07-2517-02	L-γ-GLU-β-NAPHTHYLAMIDE	100 mg
07-1879-02	γ-L-GLU-p-NITROANILIDE	100 mg

HIV PROTEASES

01-7874-02	2-AMINOBENZOYL-ALA-ARG-VAL-NLE-p-NITRO-PHE-GLU-ALA-NLE-NH₂	1 mg
01-7875-02	2-AMINOBENZOYL-ARG-VAL-NLE-p-NITRO-PHE-GLU-ALA-NLE-NH₂	1 mg
01-7876-02	ARG-VAL-NLE-p-NITRO-PHE-GLU-ALA-NLE-NH₂	1 mg

KALLIKRIEN

22-7877-02	VAL-SER-GLN-ASN-TYR-PRO-ILE-VAL	1 mg
01-5407-02	ACETYL-PHE-ARG ETHYLESTER acetate	25 mg
02-0601-03	BENZOYL-L-ARG ETHYLESTER HCl	100 mg
20-7230-03	p-TOSYL-L-ARG METHYLESTER HCl	1 gm
03-9118-02	CBZ-PHE-ARG-7-AMIDO-4-METHYLCOUMARIN	5 mg
03-3554-02	CBZ-L-TYR-p-NITROPHENYLESTER	100 mg

LEUCYL AMINOPEPTIDASE

12-8476-03	LEU-7-AMIDO-4-METHYLCOUMARIN	10 mg
12-3640-03	L-LEU-4-METHOXY-b-NAPHTHYLAMIDE HCl	100 mg
12-8732-03	L-LEU-p-NITROANILIDE HCl	100 mg
12-3639-03	L-LEUCINAMIDE HCl	500 mg

MAST CELL PROTEASES

02-0619-03	N-BENZOYL-L-TYR ETHYLESTER	250 mg
19-7864-02	SUCCINYL-VAL-PRO-PHE-p-NITROANILIDE	10 mg
19-7879-02	SUCCINYL-PHE-PRO-PHE-p-NITROANILIDE	10 mg

METALLOENDOPEPTIDASE

02-0900-02	BOC-PHE-ALA-ALA-PHE-p-AMINOBENZOIC ACID	5 mg
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NEUTRAL ENDOPEPTIDASE 24.5

03-7880-02	CBZ-GLY-GLY-ARG-b-NAPHTHYLAMIDE HCl	10 mg
03-7881-02	CBZ-LEU-LEU-GLU-b-NAPHTHYLAMIDE	10 mg

PAPAIN

01-4813-03	N-a-ACETYL-L-ARG-p-NITROANILIDE	25 mg
01-5408-02	ACETYL-PHE-GLY-p-NITROANILIDE	10 mg
02-0602-03	N-a-BENZOYL-DL-ARG-b-NAPHTHYLAMIDE HCl	100 mg
02-0603-03	N-BENZOYL-DL-ARG-p-NITROANILIDE	100 mg
03-9118-02	CBZ-PHE-ARG-7-AMIDO-4-METHYLCOUMARIN	5 mg
01-0109-09	N-ACETYL-L-PHE-3,5-DIIODO-L-TYR	50 mg

PLASMIN

02-0601-03	BENZOYL-L-ARG ETHYLESTER HCl	100 mg
02-0603-03	BENZOYL-DL-ARG-p-NITROANILIDE	100 mg
07-5258-02	GLY-ARG-b-NAPHTHYLAMIDE HCl	25 mg

PROTEINASE yscE

03-5470-02	CBZ-ALA-ALA-LEU-p-NITROANILIDE
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PROTEINASE yscF

02-7895-02	BOC-GLY-LYS-ARG-7-AMIDO-4-METHYLCOUMARIN HCl	10 mg
02-7896-02	BOC-LEU-ARG-ARG-7-AMIDO-4-METHYLCOUMARIN HCl	10 mg

RENIN

19-6284-02	SUCCINYL-ARG-PEO-PHE-HIS-LEU-LEU-TYR-7-AMIDO-4-METHYLCOUMARIN	10 mg
03-3547-02	CBZ-PRO-PHE-HIS-LEU-LEU-VAL-TYR-SER-b-NAPHTHYLAMIDE	10 mg

STROMELYSIN

04-7899-02 **DNP-PRO-LEU-GLY-LEU-TRP-ALA-D-ARG NH₂** 1 mg

THERMOLYSIN

19-8082-02 **SUCCINYL-ALA-ALA-PHE-7-AMIDO-4-METHYLCOUMARIN** 10 mg

06-8083-03 **3-(FURYLACRYLOYL)-GLY-PHE-NH₂** 10 mg

03-8084-02 **CBZ-PHE-LEU-ALA** 10 mg

THROMBIN

02-0601-03 **BENZOYL-L-ARG ETHYLESTER HCl** 100 mg

02-5453-02 **BENZOYL-PHE-VAL-ARG-7-AMIDO-4-METHYLCOUMARIN** 10 mg

20-7230-03 **p-TOSYL-L-ARG METHYLESTER HCl** 1 gm

TISSUE TYPE PLASMINOGEN ATIVATOR

07-8471-02 **GLUTARYL-GLY-ARG-7-AMIDO-4-METHYLCOUMARIN** 10 mg

TRIPEPTIDE AMINOPEPTIDASE

07-2532-02 **GLY-GLY-GLY** 500 mg

12-3642-02 **LEU-GLY-GLY** 100 mg

01-0952-02 **ALA-GLY-GLY** 100 mg

TRYPSIN

01-0131-03 **ACETYL-L-TYR ETHYLESTER** 100 mg

02-0602-03 **BENZOYL-DL-ARGININE-b-NAPHTHYLAMIDE HCl** 100 mg

02-0601-03 **BENZOYL-L-ARG ETHYLESTER HCl** 100 mg

20-7230-03 **p-TOSYL-L-ARG METHYLESTER HCl** 1 gm

UROKINASE

20-7230-03 **p-TOSYL-L-ARG METHYLESTER HCl** 1 gm

Ergocalciferol see **STEROIDS**

05-9034-17 **ERGOCRISTINE** 10 mg
[511-08-0] m.w. 609.70 m.p. 160-170°C

ERGOSTEROL (Provitamin D2) see **STEROIDS**

05-9037-17 **L(-)-ERGOTAMINE-L(+)-TARTRATE** 10 mg
m.w. 1313.44 m.p. prox. 190°C

05-6153-21 **ERYTHROMYCIN** 1 & 5 gm
m.w. 733.92

05-1059-04 **ESCIN POLYSULFONATE** sodium salt 10 & 50 gm

05-1810-04 **ESCULIN** hemihydrate 5 & 25 gm
[531-75-9] m.w. 367.15 m.p. 205°C

05-8673-03 **S-ETHYL-L-CYSTEINE** 1 & 10 gm
[2629-59-6] m.w. 149.21 m.p. 240°C

05-8662-06 **ETHYLENE GLYCOL DIPHENYL ETHER** 5 & 25 gm
[104-66-5]

05-2594-06 **EVANS BLUE** 10 & 25 gm
[314-13-6]

F

06-7062-17 **FARNESOL** 1 gm
[4602-84-0] m.w. 227.37 (checked by GC)

Fatty Acids see separate section

06-2163-06 **FERULIC ACID ETHYLESTER** 1 & 5 gm
[4046-02-0] m.w. 222.25

06-2164-06 **FERULIC ACID METHYLESTER** 1 & 5 gm
[2309-07-1] m.w. 208.23

FIBRIN ANTI-POLYMERANTS

06-7114-02 **FIBRIN ANTI-POLYMERANT** 10 mg
(Gly-His-Arg-Pro acetate)

06-7115-02 **FIBRIN ANTI-POLYMERANT** 10 mg
(Gly-Pro-Arg acetate)

06-7116-02 **FIBRIN ANTI-POLYMERANT** 10 mg
(Gly-Pro-Arg-Pro acetate)

FIBRINOPEPTIDES

06-7117-02	FIBRINOPEPTIDE A (Human) (Ala-Asp-Ser-Gly-Glu-Gly-Asp-Phe-Leu-Ala-Glu-Gly-Gly-Val-Arg)	1 mg
20-5154-02	(L-Tyr FIBRINOPEPTIDE A) (L-Tyr-Ala-Asp-Ser-Gly-Glu-Gly-Asp-Phe-Leu-Ala-Glu-Gly-Gly-Gly-Val-Arg) m.w. 1699.75	1 mg
06-7140-02	FIBRINOPEPTIDE B (Pyroglu-Gly-Val-Asn-Asp-Asn-Glu-Gly-Phe-Phe-Ser-Ala-Arg)	1 mg
06-7141-02	(Glu1)-FIBRINOPEPTIDE B (Glu-Gly-Val-Asn-Asp-Asn-Glu-Glu-Gly-Phe-Ser-Ala-Arg)	1 mg
16-5145-02	FIBRINOPEPTIDE B TYR (Pyroglu-Gly-Val-Asn-Asp-Asn-Glu-Glu-Gly-Phe-Phe-Ser-Ala-Arg-Tyr) m.w. 1715.74	1 mg

FIBROBLAST FACTORS

16-7146-02	(FIBROBLAST ACIDIC GROWTH FACTOR FRAGMENT 1-11) (Phe-Asn-Leu-Pro-Leu-Gly-Asn-Tyr-Lys-Lys-Pro)	1 mg
16-7155-02	(FIBROBLAST BASIC GROWTH FACTOR FRAGMENT 1-24) (Pro-Ala-Leu-Pro-Glu-Asp-Gly-Gly-Ser-Gly-Ala-Phe-Pro-Pro-Gly-His-Phe-Lys-Asp-Pro-Lys-Arg-Leu-Tyr)	1 mg

FIBRONECTINS

06-7163-02	FIBRONECTIN RELATED PEPTIDE (Cys-Gln-Asp-Ser-Glu-Thr-Arg-Thr-Phe-Tyr)	1 mg
01-6034-02	FIBRONECTIN FRAGMENT (L-Arg-Gly-Asp)	1 & 5 mg

01-6035-02	FIBRONECTIN FRAGMENT (L-Arg-Gly-Asp-Ser)	1 & 5 mg
06-7164-02	FIBRONECTIN FRAGMENT (Gly-Arg-Ala-Asp-Ser-Pro-Lys)	1 mg
06-6642-02	FIBRONECTIN FRAGMENT (Gly-Arg-Gly-Asp)	1 & 5 mg
06-7166-02	FIBRONECTIN FRAGMENT (Gly-Arg-Gly-Asp-Ser)	1 & 5 mg
06-6220-06	FLUORESCAMINE [38183-12-9] m.w. 278.27 m.p. 154-156°C	25 & 100 mg
06-3293-06	FLUORESCEIN [2321-07-5] m.w. 332.31	25 & 100 gm
06-3892-06	FLUORESCEIN DIPROPIONATE m.w. 446.3	1 & 5 gm
06-3290-06	FLUORESCEIN DISODIUM SALT [518-47-8] m.w. 376.28	10 & 50 gm
06-3291-06	FLUORESCEINAMINE, Isomer I [3326-34-9] m.w. 347.33 m.p. 223°C dec.	500 mg & 1 gm
06-3292-06	FLUORESCEINAMINE, Isomer II [51649-83-3] m.w. 347.33 m.p. 285°C dec.	500 mg & 1 gm
06-7492-06	5-FLUOROURACIL 99% [51-21-8] m.w. 130.08 m.p. 280-282°C	500 mg & 1 gm
06-5760-03	N-a-FMOC-L-ALA m.p. 146-147°C	1 & 5 gm
06-5762-03	N-a-FMOC-L-ASN m.p. 198-200°C	1 & 5 gm
06-5761-03	N-a-FMOC-O-t-BUTYL-L-ASP m.p. 147-148°C	1 & 5 gm

06-5765-03	N-FMOC-O-t-BUTYL-L-GLU m.p. 87-89°C	1 & 5 gm
06-5766-03	N-a-FMOC-L-GLN m.p. 225-226°C	1 & 5 gm
06-5764-03	N-FMOC GLYCINE m.p. 174-175°C	1 & 5 gm
06-5767-03	N-FMOC-L-ILE m.p. 145-147°C	1 & 5 gm
06-5768-03	N-FMOC-L-LEU m.p. 152-153°C	1 & 5 gm
06-5769-03	N-a-FMOC-t-BOC-L-LYS m.p. 132-134°C	1 & 5 gm
06-5770-03	N-FMOC-L-MET m.p. 105-107°C	1 & 5 gm
06-5771-03	N-FMOC-L-PHE m.p. 150-151°C	1 & 5 gm
06-5772-03	N-FMOC-L-PRO m.p. 114-115°C	1 & 5 gm
06-5773-03	N-FMOC-t-BUTYL-L-SER m.p. 127-128°C	1 & 5 gm
06-5774-03	N-FMOC-t-BUTYL-L-THR m.p. 131-132°C	1 & 5 gm
06-5776-03	N-FMOC-t-BUTYL-L-TYR m.p. 148-150°C	1 & 5 gm
06-5777-03	N-FMOC-L-VAL m.p. 143-144°C	1 & 5 gm
06-7924-25	FOLIC ACID [59-30-3] m.w. 441.41	5 & 25 gm

2000-5	FOLLICILE STIMULATING HORMONE (FSH) PORCINE m.w. prox. 30,000 50 units/vial	1 vial
06-6037-03	N-FORMYL-L-GLU m.w. 175.15	500 mg & 1 gm
12-6081-02	FORMYL LHRH (2-10) (N-a-Formyl-His-Trp-Ser-Tyr-Gly-Leu-Arg-Pro-Gly NH ₂)	1 mg
06-5484-02	N-FORMYL-L-MET-LEU-PHE (Chemotactic peptide) m.w. 437.7	25 & 50 mg
06-5486-02	N-FORMYL-L-MET-MET-MET	10 & 25 mg
06-5488-02	N-FORMYL-NLE-LEU-PHE-NLE-TYR-LYS (Chemoattractant for human Neutrophils)	10 & 25 mg
06-5489-02	N-FORMYL-L-PHE-MET	25 & 50 mg
06-4547-03	N-FORMYL-D-VAL m.w. 145.16	500 mg & 1 gm
06-2220-04	D-FRUCTOSE (Levulose) [57-48-7] m.w. 180.16	25 & 250 gm
06-2232-04	FRUCTOSE-6-PHOSPHATE DISODIUM SALT [26177-86-6]	100 & 250 mg
06-2233-04	L-FUCOSE (6-Deoxy-L-Galactose) [2438-80-4] m.w. 164.16	1 & 10 gm
06-2234-04	D-FUCOSE (6-Deoxy-D-Galactose) [3615-37-0] m.w. 164.16	1 & 10 gm
06-1279-07	6-FURFURYLAMINOPURINE (Kinetin) [525-79-1]	1 & 10 gm
06-7759-02	3-(2-FURYLACRYLOL)-ALA-ARG SALT (Carboxypeptidase N substrate)	10 & 25 mg
06-5491-02	3-(2-FURYLACRYLOYL)-GLY-L-LEU (Substrate for Thermolysin)	25 & 50 mg

06-5492-02	3-(2-FURYLACRYLOYL)-GLY-L-LEU NH₂ (Substrate for Thermolysin)	25 & 50 mg
06-8083-02	3-(2-FURYLACRYLOL)-GLY-PHE-NH₂ (Thrmolysin substrate)	10 & 25 mg
06-7758-02	3-(2-FURYLACRYLOL)-PHE-PHE (Carboxypeptidase A)	10 & 25 mg
06-5493-02	3-(2-FURYLACRYLOYL)-L-PHE-GLY-GLY (For cont. spectrophoto. assay of angio I CE)	25 & 50 mg

G

07-7657-04	L(-)-GALACTOSE m.w. 180.16 m.p. 163-165°C rot: -80° c=2 H2	50 & 100 mg
07-2564-04	D-GALACTOSE purified (Glucose free) [59-23-4] m.w. 180.16	100 & 500 gm
07-4223-04	a-b-D-GALACTOSE pentaacetate m.w. 390.34 [6768-46-8]	10 & 50 gm
07-6223-18	b-GALACTOSIDASE (E.coli) Susp.3.2M/amm.sulf. [9031-11-2] EC 3.2.1.23 Act:300 U./mg.	1500 U
07-7468-06	GALLAMIDE [618-73-5]	1 & 5 gm
07-6626-17	GARDENIN A (G.lucida gum) [21187-73-5] m.p. 162-163°C	100 & 250 mg
07-6641-02	GASTRIC INHIBITORY PEPTIDE, Porcine (1-42) [59392-49-3]	0.5 mg
07-6187-03	GASTRIC MUCIN POWDER (Porcine) [84082-64-4]	250 gm & 1 kg

HUMAN GASTRIN, Synthetic

HISTORY: In 1964, Gregory and Tracy¹ described the isolation of two heptadecapeptide amides from natural antral mucosa of hogs. They proved to be remarkably potent stimulators of gastric secretion and offer a wide range of other activities in the alimentary tract. The two compounds isolated have the following amino acid sequence:

Pyr-Gly-Pro-Trp-Met-Glu₅-Ala-Tyr-Gly-Trp-Met-Asp-Phe-NH₂ which is Gastrin-I. Gastrin-II is the phenolic sulphate ester at the TYR residue in position 12 of Gastrin-I².

BIOLOGICAL ACTIVITY: Two of the heptadecapeptide amides we offer differ only from the isolated products in that the methionine residues are replaced by leucine and norleucine³. We also offer basic gastrin with the methionine residue at position 15. The substitution of leucine or norleucine at position 15 does not effect the biological activity as noted by Morley⁶ wherein he sites these substitutions. Moreley⁵ previously showed that the methionine sulfoxide analog of the C-terminal tetrapeptide amide and almost certainly of gastrin itself is at most only weakly biologically active. The "15-Met" HGI we now offer is 99.58% pure by HPLC with Met sulfoxide being its only contaminant and at less the 1/2 percent. Tracy and Gregory⁴ described the physiological properties of many peptides structurally related to Gastrin-I and showed that only the C-terminal tetrapeptide amide: Trp-Met-Asp-Phe-NH₂ was required for biological activity.

SYNTHESIS AND TESTS: The synthesis of (15-Leucine) Human Gastrin-I was described by Kenner, et al⁷ and Wuensch and co-workers⁸. Biological and immunological tests of Human Gastrin-I analogues mentioned above are described by Holle, et al⁹, Cooke¹⁰, Konturek and Grossman¹¹ and Creutzfeldt, et al¹². The biological activity of partial sequences of the gastrins, especially the action of Pentagastrin (BOC-b-Ala-Trp-Met-Asp-Phe-NH₂) was tested by Johnson¹³, Makhoulouf, et al¹⁴ and Wormsley¹⁵.

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Typically, all Gastrin hormones run a minimum of 99% to 100% by HPLC and amino acid analysis.

Biological activity: about 1 ug/kg of bodyweight per person equals maximum gastric acid stimulation. Max rate of infusion not to exceed 2 mcg/kg/hr (950 pmol/kg/hr). Duration of infusion not to exceed 3 hrs.

Molar ext. coefficient: 12,700 at 280 nm

Storage: Original dry form Freeze -20°C **Solubility:** Saline or Krebs buffer, also H₂O

07-2700-02 **(15-Leucine) Human Gastrin I**, synthetic 1, 2.5, 5 mg

(H-Pyr-Gly-Pro-Trp-Leu-Glu-Glu-Glu-Glu-Ala-Tyr-Gly-Trp Leu-Asp-Phe-NH₂)

Lot: Typical **m.w.** 2080.2 **Peptide Content:** 88%

Purity: of peptide material 100% as confirmed by HPLC

Biological Activity: about 1 ug per kilo of bodyweight per person equals maximum gastric acid stimulation.

Amino Acid Analysis: (6N Hcl for 24h) Asp: 0.98; Glu: 5.78; Pro: 1.05; Gly: 1.94;

Ala: 1.00; Leu: 1.97; Trp: 2.06; Phe: 1.00; Tyr: 0.99 Pro: 0.7% - Trp: 1.1% - Tyr: 0.5%

Solubility: Water; 0.2 - 0.5% aqueous ammonia (vol.-%)

Storage: Dry material is stable at room temperature, however we store the dry material at -20°C to be safe. Liquified aliquots should be frozen and maintained at -20°C. Either form (dry or aliquots) are stable indefinitely when stored at -20°C

Note: Pre-dilute gastrin with HSA or BSA to avoid absorption in container. Side-products of peptide material is mainly composed of water and ammonium ions as well as minor amounts of acetate ions and dextran-coated material (1-2%) which was eluted from the Sephadex material during purification.

07-2701-02 **(15-Norleucine) Human Gastrin I**, synthetic 1, 2.5, 5 mg

(H-Pyr-Gly-Pro-Trp-Leu-Glu-Glu-Glu-Glu-Ala-Tyr-Gly-Nle-Asp-Phe-NH₂)

Lot: Typical **m.w.** 2080.2 **Peptide Content:** 82.1%

Purity: of peptide material 99% as confirmed by TLC and TLE

Systems: a: TLC - silicagel - n-butanol/acetic acid/water/pyridine, 60/6/24/20

b: TLE - silicagel - pyridine/formic acid/water, 10:1:89; pH 6.5

Amino Acid Analysis: Asp: 1.00; Glu: 5.97; Pro: 1.03; Gly: 1.98; Ala: 0.98; Leu: 1.02;
Nle: 1.00; Tyr: 1.03; Phe: 1.01; Trp: 2.06

Biological Activity: About 1 ug per kilo of bodyweight per person equals maximum gastric acid stimulation.

Solubility: 0.2 - 0.5% aqueous ammonia (vol.-%)

Storage: Refrigerate - Freeze aliquots at -20°C.

Note: Side products: Non-peptide material is composed of water and ammonium ions; it contains minor amounts of acetate ions and dextran-coated material (prox. 1-2%) which was eluted from Sephadex material during purification, namely partition CHR.

07-2702-02 **(15-Methionine) Human Gastrin I**, synthetic 1, 2.5, 5 mg

(H-Pyr-Gly-Pro-Trp-Leu-Glu-Glu-Glu-Glu-Ala-Tyr-Gly-Trp-Met-Asp-Phe-NH₂xNH₃)

Lot: Typical **m.w.** 2098.3 (w/o amm.cations) [85774-38-5] **Peptide Content:** 89%

Purity: of peptide material 99.58% as confirmed by HPLC

Biological Activity: about 1 ug per kilo of bdywght/person equals max gastric acid stimulation.

Amino Acid Analysis: (6M HCl for 24h/Thioglycolic acid) Asp: 1.04; Glu: 5.94; Pro: 1.04;

Gly: 1.97; Ala: 1.00; Met: 1.02; Leu: 1.00; Tyr: 1.03; Phe: 1.03; Trp: 2.05

Racemization test: %D: Ala: 0.6% - Pro: 0.5% - Leu: 0.8% - Asp: 2.0% - Met: 0.8% -

Phe: 1.0% - Glu: 1.7% - Tyr: 0.4% - Trp: 0.5% (cleavage rate: 91%)

Solubility: Water; 0.2 - 0.5% aqueous ammonia (vol.-%)

Storage: Dry material is stable at room temperature, however we store the dry material at -20°C to be safe. Liquified aliquots should be frozen and maintained at -20°C. Either form (dry or aliquots) are stable indefinitely when stored at -20°C.

Note: Pre-dilute gastrin with HSA or BSA to avoid absorp in container. Side-products of peptide material is mainly composed of water and ammonium ions as well as minor amounts of acetate ions and dextran-coated material (1-2%) which was eluted from the Sephadex material during purification.

07-2726-02 **Mini Gastrin II** (sulfated) 1, 5 mg & bulk

(Leu-Glu-Glu-Glu-Glu-Glu-Ala-Tyr(SO₃H)-Gly-Trp-Nle-Asp-Phe-NH₂)

Lot: Typical **m.w.** 1828.54 **Peptide Content:** 89% (by enzymatic digestion)

Purity: of peptide material 99.8% as confirmed by HPLC

Amino Acid Analysis: Asp: 1.00; Ala: 1.00; Trp: 1.00; Glu: 4.70; Leu: 0.87;

Tyr(SO₃H): 0.94; Gly: 1.00; Phe: 0.88; Nle: 1.02

Solubility: Water

Storage: Refrigerate dry material preferably at -20°C. Freeze liquified aliquots at -20°C.

Note: Side-products consists primarily of dextran-coated material which was eluted from the Sephadex material during purification.

- 07-2704-02 **(15-Leucine) Human Gastrin I (2-17)** Amm. salt, synthetic 1, 2.5, 5 mg
 (Gly-Pro-Trp-Leu-Glu-Glu-Glu-Glu-Ala-Tyr-Gly-Trp-Leu-Asp-Phe-NH₂xNH₃)
Lot: Typical m.w. 1969.16 free peptide **Peptide Content:** 88% (by enzymatic digestion)
Purity: of peptide material 99+%
Amino Acid Analysis: Asp: 1.01; Glu: 4.86; Pro: 0.99; Gly: 1.94; Ala: 1.00; Leu: 1.97;
 Tyr: 0.99; Phe: 01.02; Trp: 2.01
Solubility: Water
Storage: Refrigerate
- Note:** Side-products of non-peptide material is mainly composed of water and ammonium ions as well as minor amounts of acetate ions and column material.
- 07-2781-02 **GASTRIN, RAT (1-17)** 1 & 5 mg
 m.w. 2126.3
- 07-3763-02 **PENTAGASTRIN** 25 & 50 mg
 (t-BOC-b-Ala-Trp-Met-Asp-Phe-NH₂)
- 20-7246-02 **TETRAGASTRIN** 50 & 100 mg
 (L-Trp-Met-Asp-Phe NH₂) [1947-37-1] m.w. 595.56 m.p. 242°C (dec)
 C:57.56 H:6.14 N:13.89 S:5.56
- 20-9991-02 **TETRAGASTRIN, deaminated** 25 & 100 mg
 (L-Trp-Met-Asp-Phe OH) m.w. 597.68 C:57.94 H:5.85 N:11.58 S:5.41
- 01-0799-02 **GASTRIN 11-17, desulfated** 5 & 10 mg
 (Desulfated G11-17) (Ala-Tyr-Gly-Trp-Met-Asp-Phe NH₂) m.w. 856.0
- 01-0797-02 **GASTRIN 11-17, sulfated** 5 & 10 mg
 (Ala-Tyr(SO₃H)-Gly-Trp-Met-Asp-Phe-NH₂)
- 01-4912-02 **GASTRIN 11-17 (MET³) sulfated** 10 & 25 mg
 (Ala¹-CCK 27-33 desulfated) (L-Ala-Tyr(SO₃H)-Met-Gly-Trp-Met-Asp-Phe NH₂)
 m.w. 1116.3
- 02-1992-02 **GASTRIN 13-17, BOC PROTECTED** 10 & 25 mg
 (BOC-CCK 29-33) (N-a-t-BOC-Gly-Trp-Met-Asp-Phe NH₂) m.w. 752.94
- 07-2750-02 **GASTRIN 13-17** 10 & 25 mg
 (Caerulein 6-10) (Gly-Trp-Met-Asp-Phe-NH₂) m.w. 652.17

07-2705-02 **(15-Norleucine) Human Gastrin I (2-17)**, synthetic 1, 2.5, 5 mg

(Gly-Pro-Trp-Leu-Glu-Glu-Glu-Glu-Ala-Tyr-Gly-Trp-Nle-Asp-Phe-NH₂.NH₃)

Lot: Typical **m.w.** 1969.16 free peptide

AP Digest-Enzymatic hydrolysis (24hr):

(nmol 0.161 / 1.22 mg/ul)

HCl Hydrolysis:

(nmol 0.160 / 1.2 mg/ul)

Asp: 1.01 53.394

Glu: 4.92 288.644

Pro: 0.77 45.212

Gly: 1.69 99.118

Ala: 1.00 58.739

Nle+Tyr (tris):

2.23 130.844

Phe: 1.03 60.722

Trp: 1.97 115.994

Asp: 1.05 63.614

Glu: 4.084 293.972

Pro: 0.88 53.727

Gly: 1.94 117.917

Ala: 1.00 60.766

Leu: 0.93 56.57

Nle+Tyr (tris):

2.02 122.581

Phe: 0.99 60.241

*Gly-Pro only partly digested by APM Trp: 2.03 123.325

*Gly-Pro-Leu comes together

Mean peptide content: 89.7%

Mean peptide content: 87.3%

(Ala)

Racemization test

Ala: ND Pro: 0.5% Leu: Purity: 99+%

Ref: Wuensch,E.,et al, Int.J.Peptide Res., 37,1991,90-102 "Fully synthetic Immunogens".

07-9992-02 **GASTRIN 14-17 (CCK 29-33)** 10 & 25 mg

(Gly-Trp-Met-Asp-Phe OH) less NH₂

07-9994-02 **GASTRIN 14-17 Gly-Arg** 10 & 25 mg

CHOLECYSTOKININ 29-33

(Gly-Arg S2) (Gly-Trp-Met-Asp-Phe-Gly-Arg) m.w. 867.0

02-1993-03 **GASTRIN 14-17** 10 & 25 mg

(BOC protected) (BOC-CCK 30-33) (BOC Tetragastrin)

(N-a-t-BOC-L-Trp-Met-Asp-Phe NH₂) [5235-21-2] m.w. 696.8

02-2766-02 **GASTRIN 15-17** 25 & 50 mg

(BOC protected) (BOC-CCK 31-33) (N-a-t-BOC-MET-ASP-PHE NH₂) m.w. 509.68

13-4605-02 **GASTRIN 15-17** 25 & 50 mg

(L-Met-Asp-Phe NH₂) (C-term. of CCK-PZ) m.w. 409.46 C:52.34 H:6.28 N:13.53 S:8.15

13-4726-02	GASTRIN 15-16 (L-Met-Asp) m.w. 264.30	50 & 100 mg
01-0963-02	GASTRIN 16-17 (Caerulein 9-10) (a-L-Asp-Phe-NH ₂) m.w. 278.28	50 & 100 mg
01-0961-02	GASTRIN 16-17 deaminated (a-L-Asp-Phe) m.w. 280.28	50 & 100 mg
02-1656-02	GASTRIN 16-17 (BOC protected) (N-a-t-BOC-Asp-Phe-NH ₂) (BOC CCK 32-33) m.w. 387.50	100 & 250 mg
02-1655-03	GASTRIN 17 (BOC protected) (N-a-t-BOC-L-Phe NH ₂) (BOC-CCK 33) m.w. 264.30 C:63.29 H:7.65 N:10.44	100 & 250 mg
07-9040-17	GENISTEINE Hydrate (Alkaloid) [446-95-7] m.w. 234.37	50 mg
07-1082-21	GENTAMYCIN SULFATE prox. 600 mcg/mg	250 mg & 1 gm
07-4902-17	GINSENOSE Rb1 (Saponin of Panax ginseng)	5 mg
07-4903-17	GINSENOSE Rb2 (Saponin of Panax ginseng)	5 mg
07-4904-17	GINSENOSE Rc (Saponin of Panax ginseng)	5 mg
07-4905-17	GINSENOSE Rd (Saponin of Panax ginseng)	5 mg
07-6041-03	L-Gln-L-Ala m.w. 217.22 C:43.94 H:6.90 N:19.18	25 & 50 mg
16-7584-02	Gln-Glu-Glu-Glu-Glu-Thr-Ala-Gly-Ala-Pro-Gln-Gly-Leu-Phe-Arg-Gly-NH₂ (Pancreastatin (33-49))	1 mg

07-2519-02	L-Gln-L-Gln m.w. 306.22	50 & 100 mg
07-2520-02	L-Gln-L-Gln-L-Gln m.w. 450.33	50 & 100 mg
07-6042-03	L-Gln-Gly m.w. 203.20	25 & 50 mg
07-7897-02	Gln-Lys-Arg-Pro-Ser-Gln-Arg-Ser-Lys-Tyr-Leu (Proteinkinase C substrate)	1 mg
GLUCAGON 21-29 see: PHE-VAL-GLN-TRP-LEU-MET-ASN-THR		
GLUCAGON SEQUENCES see: HIS and PHE		
07-2577-04	b-D-GLUCOSE PENTAACETATE [604-69-3] m.w. 390.34	50 & 100 gm
07-7417-06	GLUCOSE XANTHATE	100 & 500 mg
07-5710-18	a-GLUCOSIDASE (Maltase) (yeast) [9001-42-7] EC 3.2.1.20 susp. Glycerol Act: 50 U/mg	2 & 10 mg
07-2507-03	L-GLUTAMIC ACID (cerebral/Nervouse res.) [58-86-0] m.w. 174.13 m.p. 247-249°C	100 & 500 gm
07-2511-03	DL-GLUTAMIC ACID monohydrate m.w. 192.14	25 & 100 gm
07-4548-03	L-GLUTAMIC ACID BUTYLESTER m.w. 247.25	1 & 10 gm
07-4549-03	L-GLUTAMIC ACID DIBENZYLESTER-p-TOSYLATE	5 & 25 gm
07-4551-03	L-GLUTAMIC ACID-g-METHYLESTER HCL	1 & 10 gm
07-4553-03	g-L-GLU-METHYLESTER , Base	250 & 500 mg
07-4550-03	D-GLUTAMIC ACID-g-ETHYLESTER	500 mg & 1 gm
07-2665-02	g-L-GLU-D-ALA m.w. 218.22 C: 43.65 H: 6.51 N: 12.09	25 & 50 mg

07-6044-03	L-a-GLU-L-ASP m.w. 262.22	25 & 50 mg
07-5101-02	g-L-GLU-g-L-GLU-L-ALA m.w. 347.31	25 & 50 mg
07-2522-02	a-L-GLU-a-L-GLU-L-GLU m.w. 405.33	50 & 100 mg
07-5102-02	g-L-GLU-g-L-GLU-L-GLU m.w. 405.33	25 & 50 mg
07-2182-02	g-GLU-g-GLU-GLN m.w. 413.39	10 & 25 mg
07-5103-02	GLU-GLU-GLY-PHE-LEU-GLY-D-PHE-L-LEU (Inhibitor of Cathepsin D) m.w. 911.01	1 & 5 mg
07-5104-02	g-L-GLU-g-L-GLU-L-LYS m.w. 404.40	25 & 50 mg
07-1875-02	a-L-GLU-GLY m.w. 204.17 [13716-89-7]	100 & 250 mg
06-7141-02	(Glu¹)-FIBRINOPEPTIDE B (Glu-Gly-Val-Asn-Asp-Asn-Glu-Glu-Gly-Phe-Ser-Ala-Arg)	1 mg
07-2166-02	GLU-HIS-PHE-ARG-TRP-GLY ACTH (5-10)	5 mg
07-5107-02	a-L-GLU-e-L-LYS m.w. 275.29	25 & 50 mg
07-5108-02	g-L-GLU-e-L-LYS m.w. 275.29	25 & 50 mg
07-7731-03	L-GLU-4-METHOXY-b-NAPHTHYLAMIDE (Aminopeptidase A substrate)	10 & 25 mg
07-1878-02	L-g-L-GLU-a-NAPHTHYLAMIDE m.w. 272.29	100 & 250 mg

07-2516-02	L-a-GLU-b-NAPHTHYLAMIDE (Subs. for Aminopeptidase A) m.w. 272.20	25 & 50 mg
07-1879-02	g-L-GLU-p-NITROANILIDE (Subs. for g-Glu Transpeptidase action) [7300-59-6]	100 & 250 mg
07-8474-02	L-g-GLU-L-PHE (Found in urine of patients with PKU) [7432-24-8]	25 & 50 mg
07-8473-02	L-a-GLU-PHE-TYR (Inhibitor on excitability of a giant neuron)	10 & 25 mg
07-8998-02	GLU-THR-PRO NH₂ (Thyrocalcitonin 30-32) m.w. 343.32 C: 48.63 H: 7.00 N: 16.15	25 & 50 mg
07-2523-02	a-L-GLU-L-TRP m.w. 261.28 C: 57.38 H: 5.81 N: 12.52	100 & 250 mg
07-7002-02	a-L-GLU-L-TYR m.w. 310.29 C: 54.01 H: 5.89 N: 9.03	50 & 100 mg
07-7003-02	a-L-GLU-L-TYR-L-GLU m.w. 439.39 C: 51.78 H: 5.68 N: 9.44	50 & 100 mg
07-2509-03	L-GLUTAMINE (GI/cerebral/Nervous research) [56-85-9] m.w. 146.20	25 & 100 gm
07-8676-03	DL-GLUTAMINE [585-21-7] m.w. 146.20	500 mg & 1 gm
07-1567-02	GLUTARYL-ALA-ALA-PHE-4-METHOXY-b-NAPHTHYLAMIDE m.w. 576.66 C: 64.50 H: 6.35 N: 9.65 Sol: DMF	5 & 10 mg
07-6612-02	GLUTARYL-ALA-ALA-PHE-b-NAPHTHYLAMIDE m.w. 546.6 C: 65.63 H: 6.32 N: 10.12	10 & 25 mg
07-8472-02	GLUTARYL-ALA-ALA-PRO-LEU-p-NITROANILIDE (Subst. for human pancreatic elastase)	10 & 25 mg
07-8471-02	GLUTARYL-GLY-ARG-7-AMIDO-4-METHYLCOUMARIN (Fluorogenic subst. for urokinase/Tissue type activator plasminogen)	10 & 25 mg

07-8470-02	GLUTARYL-GLY-PHE-4-METHOXY-β-NAPHTHYLAMIDE (Subst. for dipeptidyl aminopeptidase)	10 & 25 mg
07-8469-03	GLUTARYL-PHE-7-AMIDO-4-METHYLCOUMARIN (Fluorogenic subst. for chymotrypsin) m.w. 436.47	10 & 25 mg
07-8679-03	N-GLUTARYL-L-PHE-β-NITROANILIDE (Chymotrypsin substrate) m.w. 384.4	100 & 250 mg
07-8680-03	GLYCINAMIDE HCL [1668-10-6] m.w. 110.50 m.p. 186°C	5 & 25 gm
07-8681-03	GLYCINE ANHYDRIDE [4202-74-8] m.w. 114.10	25 & 100 gm
07-4554-03	GLYCINE BENZYLESTER-p-TOSYLATE [1738-76-6] m.w. 319.38	10 & 50 gm
07-4555-03	GLYCINE BUTYLESTER m.w. 102.11	1 & 10 gm
07-2652-06	GLYCINE CRESOL RED [4079-10-1]	1 & 10 gm
07-8683-03	GLYCINE-p-NITROANILIDE (Subst. for aminopeptidase) [53987-32-9] m.w. 195.18 m.p. 170-173°C	500 mg & 1 gm
07-2527-02	GLY-L-ALA [3695-73-6] m.w. 146.10	500 mg & 1 gm
07-8686-02	GLY-DL-ALA [926-77-2] m.w. 146.10	500 mg & 1 gm
07-2167-02	GLY-ALA-ALA-D-ALA-L-ALA (Immunogenic pentapeptide) m.w. 359.38	5 & 10 mg
07-8687-02	GLY-DL-α-AMINO-n-BUTYRIC Acid	500 mg & 1 gm
07-7603-02	GLY-L-ARG-OH m.w. 238.46	100 & 250 mg
06-7164-02	GLY-ARG-ALA-ASP-SER-PRO-LYS (Fibronectin Fragment)	1 mg

06-6642-02	GLY-ARG-GLY-ASP (Fibronectin Fragment)	1 & 5 mg
06-7166-02	GLY-ARG-GLY-ASP-SER (Fibronectin Fragment)	1 & 5 mg
07-7744-02	GLY-ARG-GLY-LEU-SER-LEU-SER-ARG (cAMP dependent protein kinase substrate)	1 mg
07-5258-02	GLY-ARG-b-NAPHTHYLAMIDE HCl (Dipeptidaminopeptidase I substrate)	25 & 50 mg
14-7570-02	GLY-ASN-HIS-TRP-ALA-VAL-GLY-HIS-LEU-MET-NH₂ (Neuromedin C) m.w. 1120.47	1 mg
14-8227-02	GLY-ASN-LEU-TRP-ALA-THR-GLY-HIS-PHE-MET NH₂ (Neuromedin B) m.w. 1132.46	1 mg
07-8690-02	GLY-D-ASP m.w. 190.16	100 & 250 mg
07-5109-02	GLY-ASP-ASP-ASP-ASP-LYS-b-NAPHTHYLAMIDE (Enteropeptidase substrate) m.w. 806.81	5 & 10 mg
07-1565-02	GLY-ASP-TYR(SO₃H)-MET-GLY NH₂.NH₂ m.w. 637.7	10 & 25 mg
06-6050-02	GLY-GLU-GLN-ARG-LYS-ASP-VAL-TYR-VAL-GLN-LEU-TYR-LEU (Thymopoietin Peptide Fragment) m.w. 1612.0	1 mg
07-0707-02	GLY-GLU-GLN-PHE-GLU-ASP-TYR(SO₃H)-GLY-HIS-NLE-ARG-PHE-NH₂ (Gly, Nle ⁹ -Leucosulfokinin) m.w. 1576.6	1 & 2.5 mg
07-7234-02	GLY-GLY-GLY-GLY (Tetraglycine) [637-84-3] m.w. 246.22	250 & 500 mg
07-5853-02	GLY-GLY-GLY-GLY-GLY (Pentaglycine) [7093-67-6] m.w. 308.28	100 & 250 mg
07-2922-02	GLY-GLY-GLY-GLY-GLY-GLY (Hexaglycine) m.w. 360.33	100 & 250 mg

05-7698-02	GLY-GLY-LEU-VAL-LEU-GLY-LEU-ARG-TYR-GLY-PHE-MET (Pre-Proenkephalin (128-140)) (Bovine) (Isolated from ovine adrenal chromaffin granules)	1 mg
05-5111-02	GLY-GLY-HIS-ALA m.w. 340.33	10 & 25 mg
05-3618-02	GLY-GLY-D-LEU [71184-74-2] m.w. 245.28	100 & 250 mg
05-8693-02	GLY-GLY-b-NAPHTHYLAMIDE Hbr CHR pure m.w. 338.20 C: 49.23 H: 4.74 N: 12.22	100 & 250 mg
06-6051-02	GLY-GLY-PHE-MET-HCL (b-Lipotropin 62-65)	5 mg
06-3619-02	GLY-GLY-L-PRO m.w. 229.24 C: 46.96 H: 6.57 N: 18.18	100 & 250 mg
06-5112-02	GLY-GLY-PRP-ALA m.w. 300.30	10 & 25 mg
06-7114-02	GLY-HIS-ARG-PRO acetate (Fibrin Anti-polymerant)	10 mg
07-9102-02	GLY-HIS-LEU-MET NH₂.CH₃COOH (Bombesin 11-14) m.w. 514.60	10 & 25 mg
07-2535-02	GLY-D-LEU [688-13-1] m.w. 188.23	1 & 5 gm
07-3621-02	GLY-L-LEU NH₂ HCl m.w. 222.70	100 & 250 mg
07-7737-02	GLY-LEU-GLY-GLY (Aminopeptidase M substrate)	25 & 50 mg
07-5113-02	GLY-LEU-LEU-GLY m.w. 358.45	10 & 25 mg

07-2490-02	GLY-LEU-MET-NH₂ (Terminal tetrapeptide Subst.P) m.w. 318.45 C:48.95 H:8.22 N:17.51 S:9.92	10 & 25 mg
07-5114-02	GLY-LYS-ARG-TRP diacetate m.w. 665.72	5 & 10 mg
07-3002-02	GLY-PHE-GLY SEMICARBAZONE m.w. 320.4 C:51.24 H:6.18 N:25.68 95% by HPLC	50 & 100 mg
07-5259-02	GLY-L-PHE-4-METHOXY-b-NAPHTHYLAMIDE (Dipeptideaminopeptidase I substrate)	25 & 50 mg
07-5260-02	GLY-L-PRO-4-METHOXY-b-NAPHTHYLAMIDE (Dipeptideaminopeptidase IV substrate)	25 & 50 mg
06-7115-02	GLY-PRO-ARG acetate (Fibrin anti-polymerant)	10 mg
06-7116-02	Gly-Pro-Arg-Pro acetate (Fibrin Anti-polymerant)	10 mg
07-5261-02	Gly-L-Pro-b-NAPHTHYLAMIDE (Dipeptideaminopeptidase IV substrate)	25 & 50 mg
07-3370-02	Gly-L-Pro-p-NITROANILIDE-p-TOSYLATE	25 & 100 mg
07-2551-02	Gly-L-Thr [7093-70-1] m.w. 176.17	250 & 500 mg
07-9992-02	GLY-TRP-MET-ASP-PHE OH (CCK 29-33; Gastrin 17-17) m.w. 654.72	10 & 25 mg
07-2555-02	GLY-L-TYR NH₂ acetate m.w. 296.28	250 & 500 mg
07-2556-02	GLY-TYR-GLY m.w. 295.28	100 & 250 mg
07-2558-02	GLY-D-VAL [10521-49-0] m.w. 174.20	500 mg & 1 gm

07-8873-02	GLY-VAL-SER-VAL-ALA-GLN-THR-GLN-THR (Antigenic site investigations) m.w. 890	10 & 25 mg
07-7010-21	GRAMACIDIN D (B.brevis) [1405-97-6]	100 & 500 mg

GROWTH HORMONE RELEASING FACTORS

07-2367-02	GRF (1-29) amide (Human)	0.1 & 0.5 mg
07-8166-02	GRF (1-40) (Human)	0.1 & 0.5 mg
07-8167-02	GRF (1-44) (Human) [8-3930-13-6]	0.1 & 0.5 mg
07-8168-02	GRF (1-43) (Rat) [7093-70-1] m.w. 176.17	0.1 & 0.5 mg
07-7065-17	GUAJAZULEN 99%	10 gm
07-8137-10	GUANIDINE CARBONATE 98% m.w. 180.17	500 gm & 1 kg
07-2589-07	GUANINE , Cryst. [73-40-5] m.w. 151.1	10 & 100 gm
07-2590-07	GUANOSINE Anhydrous, Cryst. [118-00-3] m.w. 283.2	10 & 100 gm
07-2598-07	GUANOSINE-5'-TRIPHOSPHATE DISODIUM [5600-37-7] m.w. 647.2 (98.2% GTP/ 1.8% GDP)	25 & 100 mg
07-4560-03	g-GUANIDO BUTYRIC ACID [463-00-3]	500 mg & 1 gm

H

08-9042-17	HARMALOL HCL [6028-07-5] m.w. 272.73 m.p. 260°C	50 mg
08-9045-17	HARMINE , Cryst. [442-51-3] m.w. 212.25 m.p. 262-265°C dec.	50 mg
08-9047-17	HARMOL HCL [40580-83-4] m.w. 198.23 m.p. prox. 325°C dec.	50 mg

HEAD ACTIVATORS

08-6052-02	HEAD ACTIVATOR (Pyroglu-Pro-Pro-Gly-Gly-Ser-Lys-Val-Ile-Leu-Phe)	1 mg
08-6053-02	(ASN⁸) HEAD ACTIVATOR (Pyroglu-Pro-Pro-Gly-Gly-Ser-Lys-Asn-Ile-Leu-Phe)	1 mg
08-6054-02	(ASP⁸) HEAD ACTIVATOR (Pyroglu-Pro-Pro-Gly-Gly-Ser-Lys-Val-Asp-Leu-Phe)	1 mg
08-6055-02	(3,4-DEHYDROPRO^{2,3}) HEAD ACTIVATOR (PYROGLU-3,4-DEHYDROPRO-3, 4-DEHYDROPRO-GLY-GLY-SER-LYS-VAL-ILE-LEU-PHE)	1 mg
08-6057-02	HEAD ACTIVATOR 7-11 (Lys-Val-Ile-Leu-Phe acetate)	1 mg
08-8262-06	HEXACHLOROETHANE 99% [67-72-1]	100 & 500 gm
08-6061-06	HIRUDIN (Thrombin inhibitor) [8001-27-2] m.w. 10,000 Act. 2000 ATU	1 vial

08-2917-02	HISTAMINE , Free base [51-45-6] m.w. 111.15	500 mg & 1 gm
08-8696-06	L-HISTIDINE Free base (GI/Anemia research) [71-00-1] m.w. 155.16	25 & 100 gm
08-2912-06	L-HISTIDINE (Vascular/Ulcer research) [5934-29-2] m.w. 209.63 m.p. 80°C Monohydrochloride.H ₂ O	100 & 250 gm
08-8698-03	DL-HISTIDINE Free base [4998-57-6] m.w. 155.16	5 & 25 gm
08-7650-02	L-HIS-L-ASP m.w. 270.25	100 & 250 mg
08-2929-02	L-HIS-L-GLU m.w. 284.26	100 & 250 mg
08-3622-02	L-HIS-GLY-GLY [32998-80-7] m.w. 269.25	50 & 100 mg
08-3623-02	L-HIS-GLY-L-HIS HCl m.w. 385.81 C: 42.78 H: 5.33 N: 25.24 Cl: 9.3	50 & 100 mg
08-3624-02	L-HIS-LEU-LEU-VAL-PHE METHYLESTER DiHCl m.w. 714.76	50 & 100 mg
08-9104-02	HIS-LEU-MET NH₂.CH₃COOH (Bombesin 12-14) m.w. 458.60 C: 48.86 H: 7.41 N: 17.85 S: 7.23	10 & 25 mg
08-2366-02	HIS-LYS-THR-ASP-SER-PHE-VAL-GLY-LEU-MET NH₂ (Substance K) (Neurokinin A) (Neuromedin L)	1 mg
08-7653-02	L-HIS-L-MET m.w. 286.34	100 & 250 mg
08-2933-02	L-HIS-L-PRO m.w. 252.27 rot: -64.2° in 1N HCl	50 & 100 mg
08-6062-02	L-HIS-PRO-PHE m.w. 399.46 (98%) Hygroscopic	50 & 100 mg

08-5115-02	HIS-PRO-PHE-HIS-LEU-D-LEU-VAL-TYR (Renin Inhibitor) m.w. 1025.21	10 & 25 mg
08-2935-02	L-HIS-SER-GLN-GLY-THR-PHE (N-term. hexapeptide of glucagon) m.w. 675.8	25 & 50 mg
08-5262-02	L-HIS-SER-4-METHOXY-b-NAPHTHYLAMIDE salt (Cathepsin C substrate)	10 & 25 mg
08-5264-02	L-HIS-L-VAL	25 & 50 mg

HIV PEPTIDES

01-1820-02	HIV PEPTIDE (ACETYL PEPSTATIN) (N-Acetyl-Val-Val-(3S,4S)-Sta-Ala-(3S,4S)-Sta)	1mg
19-1821-02	HIV SUBSTRATE II (HIV PEPTIDE) (N-Succinyl-Lys-Asp-Ser-Ser-Leu-Tyr-Pro-Ala-Leu-Thr-Phe-Asp-Lys)	1 mg
19-1822-02	HIV PEPTIDE (His-Lys-Ala-Arg-Val-Leu-p-nitro-Phe-Glu-Ala-Nle-Ser-NH ₂) (HIV Substrate III)	1 mg
08-3625-03	L-HOMOARGININE Monohydrochloride [1483-01-8]	250 & 500 mg
08-8700-03	L-HOMOCARNOSINE SULFATE m.w. 338.35 C: 35.65 H: 5.32 N: 16.42 S: 9.39 CHR pure	500 mg & 1 gm
08-8701-03	L-HOMOCITRULLINE [1190-49-4] m.w. 189.2 C: 44.41 H: 7.96 N: 22.14 CHR Pure	1 & 10 gm
08-3626-03	DL-HOMOCYSTEIC ACID [504-33-6] m.w. 183.20	1 & 5 gm
08-3630-03	DL-HOMOCYSTEINE THIOLACTONE [6038-1-9-3] m.w. 153.63	5 & 10 gm
08-4561-03	D-HOMOCYSTINE [6027-15-2] m.w. 268.36	50 & 100 gm

08-8014-17	HOMOGENITISIC ACID-g-LACTONE	250 mg & 1 gm
08-5275-02	L-HOMOPHENYLALANINE (L-a-Amino-4-Phenylbutyric acid)	250 & 500 mg
08-5276-02	D-HOMOPHENYLALANINE (D-a-Amino-4-Phenylbutyric acid)	250 & 500 mg
08-5267-02	DL-HOMOPHENYLALANINE (DL-a-Amino-4-Phenylbutyric acid)	500 mg & 1 gm
08-5265-02	L-HOMOPROLINE (L-Pipecolic acid)	250 mg
08-5266-02	D-HOMOPROLINE (D-Pipecolic acid)	250 mg
08-3631-03	L-HOMOSERINE [672-15-1] m.w. 119.12 m.p. 186-187°C dec.	250 & 500 mg
08-4562-03	D-HOMOSERINE [6027-21-0] m.w. 119.12	50 & 100 mg
08-3632-03	DL-HOMOSERINE [1927-25-9] m.w. 119.12	500 mg & 1 gm

HUMAN BONE GLa PROTEIN (BGP) fragments

16-1827-02	HUMAN BONE GLa PROTEIN 45-49 Fragment (Phe-Tyr-Gly-Pro-Val)	1 mg
20-1828-02	HUMAN BONE GLa PROTEIN (BGP) Fragment (Tyr ³⁸ ,Phe ^{42,46}) HB GLa Protein 38-49) (Tyr-Gln-Glu-Ala-Phe-Arg-Arg-Phe-Phe-Gly-Pro-Val)	1 mg

08-7066-17 **HUMULEN 94%** 250 mg
(a-Caryophyllen) m.w. 204.36

HCL see: VITAMIN B12B

08-7473-03 **meta-HYDROXY BENZALDEHYDE** 5 & 25 gm
[100-83-4]

08-8846-03 **DL-3-HYDROXYGLUTAMIC ACID** 100 & 250 mg
m.w. 163.13 C:36.55 H:5.45 N:8.47

08-5277-02 **L-a-HYDROXYISOCAPROIC ACID** 500 mg & 1 gm

08-5278-02 **L-a-HYDROXYISOVALERIC ACID** 500 mg & 1 gm

08-5279-02 **D-a-HYDROXYISOVALERIC ACID** 250 & 500 mg

08-8558-03 **d-DL(+)** allo **HYDROXY-L-LYS HCl** 50 & 100 mg

HYDROXY MALONIC ACID see: TARTRONIC ACID

2-HYDROXY-3-METHOXYBENZOIC ACID see: 3-METHOXYSALICYLIC ACID

08-3355-06 **HYDROXYMETHYL IMIDAZOLE PICRATE** 5 & 10 gm

08-5280-02 **HYDROXYMETHYL RESIN** 1 & 5 gm
(HO-CH₂-Ph-polymer)

b-HYDROXYMYRISTIC ACID see: 2-HYDROXYTETRADECANOIC ACID

08-2991-06 **HYDROXYNAPHTHOL BLUE** 1 & 10 gm
[63451-35-4]

08-8263-06 **3-HYDROXY-2-NAPHTHYLAMINE** 100 & 250 mg

08-2906-06 **2-HYDROXY-5-NITROBENZYL BROMIDE** 50 mg
(Koshland reagent) [772-33-8]

08-6506-16	2-HYDROXYOCTADECANOIC ACID 99%	50 mg
08-5281-02	L-cis-4-HYDROXYPROLINE	100 & 250 mg
08-5282-02	D-cis-4-HYDROXYPROLINE	250 & 500 mg
08-8703-03	HYDROXY-L-PROLINE [51-35-4] m.w. 131.13	5 & 25 gm
08-4231-06	2-HYDROXYPURINE monohydrate [2308-57-8] m.w. 154.1	50 mg

6-HYDROXYPURINE see: **HYPOXANTHINE**

b-HYDROXYSTEARIC ACID see: **2-HYDROXYOCTADECANOIC ACID**

08-6502-16	2-HYDROXYTETRADECANOIC ACID 99%	50 mg
08-6395-16	3-HYDROXYTETRADECANOIC ACID 98+%	25 mg
08-3736-03	DL-5-HYDROXY TRYPTOPHAN [114-03-4] m.w. 220.22	500 mg & 1 gm

3-HYDROXY TYRAMINE HCL see: **DOPAMINE HCL**

08-5716-07	5-HYDROXYURIDINE [957-77-7] m.w. 260.2	100 & 250 mg
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HYAMBATINS

01-1825-02	HYLAMBATIN (Asp-Pro-Pro-Asp-Pro-Asp-Arg-Phe-Tyr-Gly-Met-NH ₂)	1 mg
01-1826-02	entero-HYLAMBATIN (Asp-Pro-Pro-Asn-Pro-Asp-Arg-Phe-Tyr-Gly-Met-Met-NH ₂)	1 mg
08-8016-17	HYPAPHORINE HCL [20671-76-5]	50 & 100 mg

09-4567-02	L-alloILE-L-PHE METHYLESTER	100 & 250 mg
09-3775-02	L-ILE-D-ALA m.w. 202.25	50 & 100 mg
09-5283-02	ILE-ASN-LEU-LYS-ALA-LEU-ALA-ALA-LEU-ALA-LYS-LYS-ILE-LEU-NH₂ (Maastoparan)	1 & 2.5 mg
09-3636-02	L-ILE-L-ILE m.w. 244.35	50 & 100 mg
09-3637-02	L-ILE-L-LEU m.w. 244.35	50 & 100 mg
09-1897-02	L-ILE-L-PHE m.w. 278.35	100 & 250 mg
09-3638-02	L-ILE-L-SER m.w. 218.26 C:49.39 H:8.24 N:12.72	50 & 100 mg
09-8355-02	L-ILE-SER-ASP-ARG-ASP-TYR(SO₃H)-MET-GLY-TRP-MET-ASP-PHE-NH₂ (CCK-8 antibody antigen - Tryptic resistant)	1 & 2.5 mg

IMMUNOGENIC PENTAPEPTIDE see: **GLY-ALA-ALA-D-ALA-ALA**

09-8251-06	INDAZOLE [271-44-3]	100 & 250 mg
09-8252-06	INDAZOLONE [5686-93-1]	50 & 100 mg
09-8706-06	INDOLE 99% [120-72-9] m.w. 117.15 m.p. 52-54°C	5 & 25 gm
09-8707-06	INDOLE-3-ACETIC ACID [87-51-4] m.w. 175.2	5 & 25 gm

09-8708-06	INDOLE-3-ACETIC ACID HYDRAZIDE	250 & 500 mg
	m.w. 119.12 m.p. 142-145°C	
09-8709-06	INDOLE-3-BUTYRIC ACID	1 & 5 gm
	[133-32-4] m.w. 203.2	
09-3634-06	INDOXYL ACETATE 97%	1 & 10 gm
	[608-08-2] m.p. 128-130°C	
09-3316-07	INOSINE Anhydrous, Cryst.	5 & 25 gm
	[58-63-9] m.w. 268.2	
09-3330-07	INOSINE-3',5'-CYCLIC PHOSPHATE Free acid	10 & 25 mg
	[3545-76-4] m.w. 348.2	
09-7927-25	INOSITOL	50 & 100 gm
	(B2 complex) [87-89-8] m.w. 180.16 m.p. 224-225°C	
09-3324-02	INSULIN	100 & 500 mg
	(Zinc) (Beef Pancreas) Recryst. [9004-10-8] m.w. 5734 23I.U./mg.min. dry wt.	
09-3325-02	INSULIN, BOVINE	25 & 100 mg
	Sodium prox. 25 U./mg.	
09-9730-02	INSULIN, CHAIN A,	5 & 10 mg
	oxidized (Bovine) m.w. 2344	
09-9731-02	INSULIN, CHAIN B	5 & 10 mg
	oxidized (Bovine) [30003-72-6] m.w. 3345	
09-7203-02	INSULIN, S-CARBOXYMETHYLATED, CHAIN A	10 & 25 mg
09-7204-02	INSULIN, S-CARBOXYMETHYLATED, CHAIN B	10 & 25 mg
09-3308-04	INULIN	10 & 100 gm
	[9005-80-5] m.w. prox. 5000	
09-8712-06	IDOACETIC ACID 97%	5 & 25 gm
	[64-69-7] m.w. 185.0 m.p. 77-79°C	
09-3321-07	5-iodo-2'-deoxyuridine Anhydrous, Cryst.	250 & 500 mg
	m.w. 354 [54-42-2]	

09-7466-03	3-IODO-L-TYROSINE [70-78-8] m.w. 307.10 m.p. 198-200°C dec.	1 & 10 gm
09-8714-06	DL-ISOCITRIC ACID LACTONE [4702-32-3] m.w. 174.1 m.p. 153-154°C	500 mg & 1 gm
09-4044-03	L-ISOGLUTAMINE	50 & 100 mg
09-3307-03	L-ISOLEUCINE (allo free) [73-32-5] m.w. 131.18 m.p. 284°C dec.	25 & 100 gm
09-8716-03	DL-ISOLEUCINE [443-79-8] m.w. 131.18 (50% L;50% d)	10 & 50 gm
09-4565-03	L-alloISOLEUCINE	1 & 10 gm
09-3457-03	D-alloISOLEUCINE	100 & 500 mg
09-4566-03	D-alloISOLEUCINE BENZYLESTER-p-TOSYLATE	500 mg & 1 gm
09-8717-03	L-ISOLEUCINE BENZYLESTER-p-TOSYLATE	1 & 5 gm
09-2659-04	ISOMALTOTRIOSE, lyoph. 99+% m.w. 504.4	25 & 100 mg
09-9054-17	ISOPILOSINE m.w. 286.33 m.p. 189-191°C	500 mg
09-3311-04	1,2-O-ISOPROPYLIDENE-D-XYLOFURANOSE m.w. 190.13	10 & 50 gm
09-4569-03	DL-2-ISOPROPYL-2-PHENYLGLYCINE	1 & 5 gm
09-9055-17	ISOSCOPOLETINE m.w. 192.17 m.p. 185°C	100 mg
09-9056-17	ISOSTRYCHININE HCL m.w. 334.40	5 mg
09-6269-02	ISOVAL-VAL-VAL-4-AMINO-3-HYDROXY-5-METHYLHEPTANOYL- ALA-4-AMINO-3-HYDROXY-6-METHYLHEPTANOIC ACID (Pepstatin) m.w. 686.0	1 & 5 mg

J

10-5638-30	JACK BEAN MEAL	500 gm & 1 kg
10-2596-06	JENNERS STAIN (Eosin Methylene Blue)	1 gm

K

11-6155-21	KANAMYCIN SULFATE 95% Kanamycin A - 5% Kanamycin B [25389-94-0] m.w. 582.6	1 & 10 gm
11-6627-17	KARANJIN (Furano flavone from P.glabra oil) m.w. 292.28	100 & 250 mg
KEMPTIDE see: LEU-ARG-ARG-ALA-SER-LEU-GLY		
11-8722-03	α-KETOBUTYRIC ACID SODIUM SALT [2013-26-5] m.w. 124.07	1 & 10 gm
11-3901-03	α-KETOGLUTARIC ACID (White) [328-50-7] m.w. 146.10	100 & 500 gm
11-3904-03	α-KETOISOCAPROIC ACID sodium salt	100 & 500 mg
11-8729-03	L-KYNURENINE SULFATE [16055-30-4]	500 mg & 1 gm

KYOTORPHIN see: **SER-TYR-ARG**

L

12-4302-18	LACTATE DEHYDROGENASE (Rabbit muscle) [9001-60-9] EC 1.1.1.27 2X cryst. Susp. Act: 225 U/mg (1600 u.vial)	1600 U
12-8399-18	b-LACTOGLOBULINS (Milk) 3X cryst.	1 & 5 gm
12-4417-04	a-LACTULOSE syrup m.w. 342.2 [58116-25-9]	50 & 100 gm
12-4830-06	LAURYL CHOLINE CHORIDE , Cryst.	5 & 10 gm
12-4328-16	LAURYL SODIUM SULFATE m.w. 288.49	5 & 10 gm
12-4356-16	LAURYL SODIUM SULFONATE m.w. 272.38	5 & 10 gm
12-3639-03	L-LEUCINEAMIDE HCl [10466-61-2] m.w. 166.65	500 mg & 1 gm
12-4307-03	DL-LEUCINE [328-39-2] m.w. 131.18	10 & 50 gm
12-8476-03	LEU-7-AMIDO-4-METHYLCOUMARIN (Free base) (Fluorogenic subst. for aminopeptidase M)	10 & 25 mg
12-8731-03	L-LEUCINE BENZYLESTER-p-TOSYLATE	1 & 10 gm
12-4571-03	L-LEUCINE-t-BUTYLESTER-p-TOSYLATE	1 & 10 gm
12-4309-03	L-LEUCINE ETHYLESTER HCl [2743-40-0] m.w. 195.69	1 & 10 gm
12-4310-03	L-LEUCINE METHYLESTER HCl [7517-19-3] m.w. 181.66	1 & 10 gm
12-4355-03	L-LEUCINE-p-NITROANILIDE (Aminopeptidase M substrate) [4178-93-2]	100 & 250 mg
12-4312-03	L-LEUCYL-b-NAPHTHYLAMIDE HCl (Aminopeptidase M substrate)	100 & 250 mg

LEU-ENKEPHALIN see: **TYR-GLY-GLY-PHE-LEU****(15-LEU) HUMAN GASTRIN I** see: **GASTRIN, HUMAN**

12-4314-02	L-LEU-L-ALA monohydrate (PKU peptide) [7298-84-2] m.w. 202.25 Assay: 99+% rot: +16.5° c=1 MeOH	1 & 5 gm
12-4420-02	L-LEU-D-ALA m.w. 202.25	50 & 100 mg
12-4421-02	D-LEU-D-ALA m.w. 202.25	25 & 100 mg
12-8258-02	D-LEU-L-ALA m.w. 202.25	50 & 100 mg
12-5285-02	LEU-ARG-ARG-ALA-SER-LEU-GLY (Kemptide) (cAMP dependent proteinkinase substrate)	1 mg
12-6083-02	LEU-ARG-PRO-GLY-NH₂·2HCl (LHRH 7-10)	50 mg
12-4315-02	L-LEU-GLY [686-50-0] m.w. 188.23	500 mg & 1 gm
12-4422-02	DL-LEU-GLY [615-82-7] m.w. 188.23	500 mg & 1 gm
12-3642-02	L-LEU-GLY-GLY [1187-50-4] m.w. 245.28	100 & 250 mg
12-4316-02	L-LEU-GLY-L-LEU m.w. 301.39 C: 55.34 H: 9.14 N: 13.82	50 & 100 mg
12-8740-02	L-LEU-GLY-DL-PHE m.w. 335.40	500 mg & 1 gm
12-4317-02	L-LEU-L-LEU m.w. 202.25	250 mg & 1 gm

12-4318-02	L-LEU-D-LEU [17665-02-2] m.w. 244.35	100 & 250 mg
12-4319-02	D-LEU-L-LEU m.w. 244.35	100 & 250 mg
12-4320-02	D-LEU-D-LEU m.w. 244.35	100 & 250 mg
12-3643-02	L-LEU-LEU-LEU-PHE METHYLESTER HCL m.w. 555.19	50 & 100 mg
12-3644-02	L-LEU-LEU-LEU-TYR METHYLESTER HCL m.w. 571.19	50 & 100 mg
12-3645-02	L-LEU-LEU-LEU-VAL-TYR m.w. 619.82 Leu: 3.16; Val: 1.00; Thr: 0.96	25 & 50 mg
12-9103-02	L-LEU-L-MET NH₂ (Bombesin 13-14) m.w. 261.40 C: 50.21 H: 8.77 N: 15.83 S: 12.27	10 & 25 mg

LEUPEPTIN see: **ACETYL-LEU-LEU-ARG SULFATE**

12-4423-02	L-LEU-L-PHE [3063-05-6] m.w. 278.35	50 & 100 mg
12-4424-02	L-LEU-D-PHE m.w. 278.35	50 & 100 mg
12-4427-02	D-LEU-D-PHE m.w. 278.35 C: 64.28 H: 7.92 N: 9.92	50 & 100 mg
12-1902-02	L-LEU-L-PRO m.w. 228.29	100 & 250 mg
12-7789-02	LEU-SER-p-NITRO-PHE-NLE-ALA-LEU-METHYLESTER TFA (Chymosin substrate)	5 mg
12-5116-02	L-LEU-SER-PHE-NLE-ALA-ILE METHYLESTER TFA (Chymosin substrate)	5 & 10 mg

12-4351-02	L-LEU-L-TRP .1/3 H₂O (fragment A) m.w. 223.37 C:63.36 H:7.70 O:16.80 [5156-22-9]	50 & 100 mg
12-7000-02	L-LEU-TRP-LEU .1/2 H₂O m.w. 434.55 C:62.66 H:8.05 N:12.58	50 & 100 mg
12-4352-02	L-LEU-TRP-MET .1/2 H₂O (fragment B) m.w. 478.82 C:57.72 H:7.30 N:11.62 S:6.60	50 & 100 mg
12-4353-02	L-LEU-TRP-MET-ARG .OH AcOH .1/2 H₂O (fragment C) m.w. 604.75 C:53.62 H:7.55 N:16.54 S:5.05	50 & 100 mg
12-4354-02	L-LEU-TRP-MET-ARG-PHE ACETATE .2H₂O (fragment D) m.w. 830.1 C:55.12 H:7.13 N:14.62 S:3.90	50 & 100 mg
12-4350-02	L-LEU-TRP-MET-ARG-PHE-ALA acetate .H₂O (Model Peptide Substrate) m.w. 901.1	50 mg
12-4322-02	L-LEU-L-TYR m.w. 294.35 C:60.38 H:7.55 N:9.34 [968-21-8]	500 mg & 1 gm
12-6393-02	D-LEU-D-TYR m.w. 294.35 C:60.54 H:7.48 N:9.46	25 & 100 mg
12-7001-02	L-LEU-TYR-LEU .1/2 H₂O m.w. 416.52 C:60.36 H:8.37 N:10.0	50 & 100 mg

LEUCOSULFOKININ ANALOG see: **GLY-GLU-GLN.....**

12-7079-17	LINALYL ACETATE m.w. 196.29 [115-95-7]	1 gm
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LIPIDS see separate section

12-7930-25	a-LIPOIC ACID (DL-6,8-Thiooctic acid) [1200-22-2] m.w. 206.33 m.p. 59-61°C	1 & 10 gm
06-6051-02	b-LIPOTROPIN 62-65 (Gly-Gly-Phe-Met-Hcl)	5 mg
12-9058-17	LOBELANIDINE HCL [6112-86-3] m.w. 375.90 m.p. 135-138°C	25 mg
12-9061-17	LOBELINE SULFATE [134-64-5] m.w. 773.02 m.p. prox. 140°C	25 mg
12-3860-17	LOGANINE m.w. 390.40	5 mg
12-9062-17	LUPININE m.w. 169.29 m.p. 65-69°C	25 mg
12-9063-17	LUPININE HCL m.w. 205.79 m.p. 210-212°C	25 mg
12-2510-03	LUTEINIZING HORMONE (PLH) EQUINE PITUITARY Pyrogen FREE 5000 u/vial	1 vial
12-6069-02	PYROGLU-HIS-TRP-SER-TYR-GLY-LEU-ARG-PRO-GLY-NH₂ (LHRH) m.w. 1182.39	1 mg
12-6070-02	PYROGLU-HIS-TRP-SER-TYR-GLY-LEU-ARG-PRO-GLY (LHRH, free acid)	1 mg
12-6071-02	PYROGLU-HIS-TRP-SER-TYR-GLY-LEU-ARG-PRO-GLY-DINITROANILIDE (LHRH Dinitroanilide)	1 mg
12-6072-22	(N,ACETYL-3,4-DEHYDROPRO¹,P-FLUORO-D-PHE²,D-TRP^{3,6}) LHRH	1 mg
12-6073-22	(N,ACETYL-D-TRP¹,p-CHLORO-D-PHE²,D-TRP³,D-ARG⁸,D-ALA¹⁰) (Pyroglu-His-Trp-Ser-Tyr-Gly-Leu-Arg-Pro-Gly) (LHRH)	1 mg

12-4664-02	PYROGLU-HIS-TRP-SER-TYR-D-ALA-LEU-ARG-PRO-GLY NH₂ ((D-Ala ⁸) LHRH) m.w. 1198.5	1 mg
12-6074-02	PYROGLU-HIS-TRP-SER-TYR-D-ALA-N-METHYL-LEU-ARG-PRO-GLY-NH₂ ((D-Ala ⁶ , N-Methyl-Leu ⁷) LHRH)	1 mg
12-6075-22	p-AMINOPHENYL-GLU-HIS-TRP-SER-TYR-GLY-LEU-ARG-PRO-GLY NH₂ (p-Aminophenyl-GLU ¹) LHRH	1 mg
12-6076-02	PYROGLU-HIS-TRP-SER-3,5-DIIODO-TYR-GLY-LEU-ARG-PRO-GLY-NH₂ ((3,5-Diiodo-Tyr ⁵) LHRH)	1 mg
12-4574-02	D-LYS⁶-LHRH (Leuteinizing Rel. Hormone analog)	1 mg
11-6078-02	PYROGLU-D-PHE-PRO-LSER-TYR-D-PHE-LEU-ARG-PRO-GLY NH₂ ((D-Phe ^{2,6} , Pro ³) LHRH)	1 mg
12-6079-02	PYROGLU-HIS-TRP-SER-TYR-D-TRP-LEU-ARG-PRO-GLY NH₂ ((D-Trp ⁶) LHRH)	1 mg
12-6080-02	PYROGLU-HIS-TRP-SER-TYR-HYDRAZIDE (LHRH 1-5 Hydrazide)	50 mg
12-6081-02	N-a-FORMYL-HIS-TRP-SER-TYR-GLY-LEU-ARG-PRO-GLY NH₂ (FORMYL LHRH (2-10))	1 mg
11-6082-02	TRP-SER-TYR-GLY-LEU-ARG-PRO-GLY NH₂ (LHRH 3-10)	1 mg
12-6083-02	LEU-ARG-PRO-GLY-NH₂.2HCl (LHRH 7-10)	50 mg
12-4311-03	L-LYSINE METHYLESTER DiHCl m.w. 233.16	1 & 10 gm
12-4306-03	D-LYSINE Hydrochloride m.w. 182.66	500 mg & 1 gm

12-4313-03	L-LYSYL-b-NAPHTHYLAMIDE Carbonate (Aminopeptidase B substrate)	100 & 250 mg
12-8747-03	L-LYSINE-p-NITROANILIDE DiHbr m.w. 429.13 m.p. 254-257°C	250 & 500 mg
12-7014-02	LYSINO-ALA .2 Hcl	25 mg
12-8466-02	LYS-ALA NH₂ .2Hcl (Dipeptidyl aminopeptidase II subst.)	10 & 25 mg
12-8479-02	LYS-ALA-b-NAPHTHYLAMIDE (Dipeptidyl aminopeptidase II subst.)	10 & 25 mg
12-6085-02	L-LYS-L-ARG m.w. 302.37	50 & 100 mg
12-5117-02	LYS-ARG-PRO-PRO-GLY-PHE-SER-PRO-PHE-ARG (Lys-Bradykinin) (Kallidin) m.w. 1188.4	5 mg
12-4575-02	L-LYS-L-GLU (Alcoholism research) m.w. 275.29	50 & 100 mg
12-5118-02	LYS-GLU-VAL-VAL-GLU (Thymosin A, 20-24) m.w. 602.66 CHR pure	2.5 & 5.0 mg
12-3647-02	L-LYS-GLY Hcl m.w. 203.24	100 & 250 mg
12-6087-02	L-LYS-GLY-GLY m.w. 320.35	25 & 50 mg
12-4361-02	L-LYS-HIS-LYS .2CH₃COOH m.w. 441.74 C:50.10 H:7.88 N:18.8	50 & 100 mg
12-7571-02	LYS-ILE-PRO-TYR-ILE-LEU (Neuromedin N)	1 mg
12-6088-02	L-LYS-L-LEU NH₂ m.w. 258.37	25 & 50 mg
12-4574-02	D-LYS⁶-LHRH (Leuteinizing Rel. Hormone analog)	1 mg

12-3648-02	L-LYS-L-LYS .2 HCl m.w. 347.3 C:41.26 H:8.15 N:15.95	50 & 100 mg
12-5119-02	LYS-LYS-ASP-SER-GLY-PRO-TYR (b-Lipotropin 39-45) m.w. 793.86	1 & 2 mg
12-5120-02	LYS-LYS-GLY-GLU (C-term. tetrapep. Human b-Lipotropin) m.w. 460.51	10 & 25 mg
12-3649-02	L-LYS-L-LYS-L-LYS .3HCl m.w. 402.54	50 & 100 mg
12-0308-02	L-LYS-LYS-LYS-LYS-LYS .5 HCl m.w. 841.21 C:42.24 H:7.89 N:16.28	25 & 50 mg
12-3768-02	L-LYS-PHE-ILE-GLY-LEU-MET NH₂ m.w. 705.93	5 & 10 mg
12-4362-02	L-LYS-PHE-LYS .2CH₃COOH m.w. 541.61 C:54.85 H:7.82 N:12.82	50 & 100 mg
12-5121-02	L-LYS-PHE-TYR (Physalaemin fragment) m.w. 456.52	50 & 100 mg

H-LYS-LYS-GLU-ASP-ASN-VAL-LEU-VAL-GLU-SER-HIS-GLU-LYS-SER-THR-LEU-VAL-ASPVAL-ASP-ALA-LYS-ASP-ALA-GLU-GLY-LEU-LYS-ALA-LYS-SER-GLN OH

see: **PARATHYROID HORMONE, HUMAN**

12-5286-02	LYS-PRO-4-METHOXY-b-NAPHTHYLAMIDE .2HCl (Substrate for Dipeptidaminopeptidase II)	10 & 25 mg
12-6203-02	LYS-PRO-VAL-GLY-LYS-LYS-ARG-ARG-PRO-VAL-LYS-VAL-TYR-PRO (ACTH 11-24)	1 mg
12-6303-02	LYSYL TAURINE .CH₃COOH m.w. 313.4 C:36.85 H:7.55 N:12.80 S:9.66 Hygroscopic	10 & 25 mg
12-4323-02	L-LYS-L-TRP .OH ACETATE m.w. 392.42 C:58.08 H:7.30 N:14.25	50 & 100 mg

12-5122-02	L-LYS-TRP-GLY-LYS DIACETATE m.w. 637.7	25 & 50 mg
12-4324-02	L-LYS-TRP-LYS .2CH₃COOH m.w. 580.64 C:55.6 H:7.68 N:14.3	50 & 100 mg
12-4325-02	L-LYS-L-TYR ACETATE m.w. 369.39 C:55.07 H:7.39 N:11.20	50 & 100 mg
12-7004-02	L-LYS-TYR-LYS .H₃O m.w. 455.51 C:55.4 H:8.25 N:15.14	50 & 100 mg
12-6057-02	LYS-VAL-ILE-LEU-PHE acetate (Head Activator 7-11)	1 mg
12-4349-18	LYSOZYME (Egg white) lyoph. [12650-88-3] EC 3.2.1.17 Act:22,000 U./mg. product	1 & 10 gm
12-4336-04	L-LYXOSE [1949-78-6] m.w. 150.13	1 & 10 gm
12-4337-04	D-LYXOSE [114-34-7] m.w. 150.13	1 & 10 gm

M

13-2313-10	MAGNESIUM CHLORIDE [7786-30-3] m.w. 95.22	100 & 500 gm
13-4749-04	MALEIC ACID [110-16-7] m.w. 116.07	100 & 250 gm
13-4753-04	MALTOSE , Hydrate	50 & 100 gm
13-7412-04	b-MALTOSE [133-99-3]	100 & 500 mg
13-6628-17	MANAGIFERIN (M.indica leaves) [4773-96-0] m.p. 269-270°C	100 & 250 mg
13-6629-17	MANGOSTINE (Garcinia mangostana fruits) m.w. 410.45 m.p. 180-182°C	100 & 250 mg
13-4757-04	D-MANNOSAMINE HCl [5505-63-5]	250 & 500 mg
13-4755-04	D-MANNITOL [69-65-8] m.w. 182.18 m.p. 165-167°C rot: +28°	100 & 500 gm
13-4758-04	D-MANNOSE [3458-28-4] m.w. 180.16	10 & 25 gm
13-3741-03	MELATONIN [73-31-4] m.w. 232.28 m.p. 116-118°C	100 & 500 mg

MENADIOL see: **VITAMIN K4**

MENADIONE see: **VITAMIN K3**

13-7080-17	MENTHOFURAN [494-90-6]	25 mg
13-7467-06	MERCAPTO GLYCOLIC BENZOIC ACID	5 & 25 gm

13-4882-07	6-MERCAPTOPURINE [50-44-2] m.w. 170.2 m.p. 300°C	1 & 10 gm
13-7083-17	METHON [89-80-5] m.w. 154.25	25 ml
13-7084-17	iso-METHON 95%	1 gm
13-8749-03	g-METHALLYL GLYCINE	50 & 100 mg
13-8017-06	METHAPYRILENE HCl	10 & 25 mg
13-4773-06	METHAZOXYMETHANOL ACETATE	1 gm
13-4715-03	D-METHIONINE [348-67-4] m.w. 149.21	1 & 10 gm
13-4717-03	L-METHIONINE-DL-SULFOXIDE m.w. 410.45 m.p. 232-234°C	1 & 10 gm
13-4718-03	L-METHIONINE-DL-SULFOXIMINE m.w. 180.22	500 mg & 1 gm
13-4723-02	L-MET-L-ALA m.w. 220.29 C: 43.56 H: 7.45 N: 12.62 S: 14.72	50 & 100 mg
13-4724-02	L-MET-ALA-MET m.w. 351.46 C: 44.70 H: 7.30 N: 12.02 S: 18.16	50 & 100 mg
13-4725-02	L-MET-ALA-SER m.w. 307.34 C: 42.76 H: 6.80 N: 13.58 S: 10.29	50 & 100 mg
13-4811-02	L-MET-ARG-PHE acetate .1/2 H₂O (fragment F) m.w. 539.55 C: 48.91 H: 7.00 N: 15.63 S: 5.84	50 & 100 mg
13-4041-02	L-MET-ARG-PHE NH₂ .2CH₃COOH amorphous powder m.w. 571.7	25 & 50 mg
13-4794-02	L-MET-ARG-PHE-ALA (fragment E) m.w. 523.7 C: 51.65 H: 6.94 N: 18.55 S: 5.96	50 & 100 mg
13-4726-02	L-MET-ASP m.w. 264.30	50 & 100 mg

13-4605-02	L-MET-ASP-PHE NH₂ (C-term. of CCK-PZ) m.w. 409.46 C: 52.34 H: 6.28 N: 13.53 S: 8.15	25 & 50 mg
 MET-ENKEPHALIN see: ENKEPHALINS		
13-4729-02	L-MET-L-GLN.OH C: 43.33 H: 6.95 N: 15.09 S: 11.56	25 & 100 mg
13-4728-02	L-MET-GLU m.w. 278.33 rot: + 18.5° in N Hcl c=1	50 & 100 mg
01-5996-02	MET-GLU-HIS-PHE-ARG-TRP (ACTH 4-9)	5 mg
13-2173-02	L-MET-GLU-HIS-PHE-ARG-TRP-GLY ACTH (4-10) m.w. 962.20	1 mg
01-5949-02	MET-GLU-HIS-PHE-ARG-TRP-GLY-LYS (ACTH 4-11) m.w. 1090.39	1 mg
13-5123-02	MET(S=O)-GLU-HIS-PHE-D-LYS-PHE (ACTH 4-9 analog) m.w. 854.07	1 mg
13-4730-02	L-MET-GLY [14486-03-4] m.w. 206.26 rot: +86.5° in H ₂ O	100 & 250 mg
13-4731-02	L-MET-GLY-GLY m.w. 263.32 rot: +59.8° in H ₂ O c=2	50 & 100 mg
13-4732-02	L-MET-GLY-MET m.w. 337.43 rot: +20.8° in Hcl c=1	50 & 100 mg
13-4733-02	L-MET-GLY-MET-MET m.w. 468.62 C: 43.43 H: 6.90 N: 11.91	50 & 100 mg
13-5025-02	L-MET-GLY-TRP-MET-ASP-PHE NH₂ (CCKPZ 28-33) m.w. 783.90 C: 54.56 H: 6.12 N: 13.94 S: 8.08	10 & 25 mg
13-4734-02	L-MET-HIS hemiacetate m.w. 286.34 (Free Peptide) rot: +19.8° in NHcl c=1	50 & 100 mg

13-6098-02	L-MET-L-ILE m.w. 262.37	50 & 100 mg
13-4735-02	L-MET-LEU m.w. 262.37 rot: +11.8° in NHCl c=2	50 & 100 mg
13-4736-02	L-MET-LEU-GLY m.w. 319.42 rot: -24.5° in N NaOH c=1	50 & 100 mg
02-6236-02	MET-LYS-ARG-PRO-PRO-GLY-PHE-SER-PRO-PHE-ARG (Met-Lys-Bradykinin) m.w. 1319.6	5 mg
13-4737-02	L-MET-MET m.w. 280.39 rot: +26.0° in H ₂ O c=1	50 & 100 mg
13-4875-02	L-MET-MET-ALA m.w. 351.46	50 & 100 mg
13-4738-02	L-MET-MET-MET m.w. 411.57 rot: -9.9° in 1NHCl c=1	50 & 100 mg
13-4739-02	L-MET-PHE m.w. 296.37 rot: +34.8° in 80% acetic c=2	50 & 100 mg
13-4876-02	L-MET-PHE-GLY m.w. 353.42	50 & 100 mg
13-6099-02	L-MET-L-PRO m.w. 246.33	50 & 100 mg
13-4740-02	L-MET-SER m.w. 236.28 rot: +33.2° in 1NHCl c=2	50 & 100 mg
13-4741-02	L-MET-THR m.w. 250.30 rot: +23.2° in H ₂ O c=1	50 & 100 mg
13-4604-02	L-MET-TYR NH₂ HCL m.w. 346.84	50 & 100 mg
13-7555-02	L-MET-TYR-PHE NH₂ HCl m.w. 495.04	10 & 25 mg

13-4743-02	L-MET-VAL m.w. 248.33 rot: +24.0° in H ₂ O c=2	50 & 100 mg
13-7409-03	3-METHOXY-4-HYDROXY MANDELIC ACID [23942-20-9] m.w. 198.17 m.p. 131-133°C	500 mg & 1 gm
13-7416-06	4-METHOXY-2-NAPHTHYLAMINE	50 & 100 mg
13-4711-06	2-METHOXY-5-NITROBENZYL BROMIDE [3913-23-3] m.p. 78-80°C	1 & 5 gm
13-5124-02	METHOXYSUCCINYL-ALA-ALA-PRO-MET-p-NITROANILIDE (Soluble Cathepsin G substrate)	10 & 25 mg
13-5125-02	METHOXYSUCCINYL-ALA-ALA-PRO-VAL-p-NITROANILIDE (Subs. for assay of human leucocyte)	10 & 25 mg
13-4894-07	2'-O-METHYLADENOSINE [2140-79-6] m.w. 290.2	10 & 25 mg
13-8929-03	DL-N-METHYLALANINE	500 mg & 1 gm
13-8755-03	DL-a-METHYLASPARTIC ACID [6667-60-3] m.w. 147.13	500 mg & 1 gm
13-5726-04	METHYL-4,6-BENZYLIDENE-2,3-di-o-p-TOLUENESULFONYL-a-D-GLUCOPYRANOSIDE	250 & 500 mg
13-4719-03	S-METHYL-L-CYSTEINE [1187-84-4] m.w. 135.18 m.p. 245-250°C	1 & 5 gm
13-9110-07	3-METHYLCYTIDINE METHOSULFATE [21028-20-6] m.w. 369.35 m.p. 192-194°C (softens) 226-228°C dec.	100 & 250 mg
13-9111-07	5-METHYLCYTIDINE [2140-61-6] m.w. 257.24 m.p. 215-217°C CHR Pure	50 & 100 mg
13-5728-04	METHYL-6-DEOXY-a-D-GLUCOPYRANOSIDE	10 & 25 mg
13-4763-04	METHYL-a-D-GALACTOPYRANOSIDE Monohydrate m.w. 212.20	5 & 10 gm
13-9976-07	N²-METHYLGUANOSINE	1 & 5 mg

13-8762-03	e-N-METHYL-L-LYSINE Hcl [7622-29-9] m.w. 196.68 m.p. 250-254°C dec.	50 & 100 mg
13-6822-04	METHYL-a-D-MANNOPYRANOSIDE m.w. 194.18	1 & 10 gm
13-7935-25	METHYL NICOTINATE 99% [93-60-7] m.w. 137.14 m.p. 42-43°C	50 & 100 gm
13-8660-06	2-METHYL-5-NITRO BENZENE	500 mg & 1 gm
13-4810-06	4-METHYLPYRAZOLE SULFATE m.w. 82.11	1 gm
13-8663-06	METHYL PYRAZOLONE	1 & 10 gm
13-8249-03	DL-a-METHYL SERINE m.w. 119.12	1 & 5 gm
13-4838-06	p-bis(O-METHYLSTYRYL) BENZENE	1 & 5 gm
13-9120-07	5-METHYL-2-THIOURIDINE (2-Thiothymine Riboside) m.p. 219-221°C CHR Pure	50 & 100 mg
13-4878-06	METHYLTHYMOL BLUE [1945-77-3]	5 gm
13-5730-04	4-METHYLUMBELLIFERYL-2-ACETAMIDE-4,6-o-BENZYLIDENE- 2-DEOXY-b-D-GLUCOPYRANSOIDE	25 & 50 mg
13-4702-04	4-METHYLUMBELLIFERYL-b-D-GALACTOPYRANOSIDE [6160-78-7]	10 & 25 mg
13-4703-04	4-METHYLUMBELLIFERYL-b-D-XYLOPYRANOSIDE	10 & 25 mg
13-4701-04	4-METHYLUMBELLIFERYL-b-D-GLUCOSIDE	50 & 100 mg
13-4932-07	5-METHYLURIDINE [1463-10-1] m.w. 258.2	100 & 500 mg
13-8018-06	DL-MEVALONIC ACID-5'-PHOSPHATE dibucine salt	25 & 100 mg
13-2508-03	MONOSODIUM GLUTAMATE monohydrate [142-47-2]	1 & 10 kg

13-2716-02 **13-NLE MOTILIN** 1 & 2.5 mg

Porcine m.w. 2682.1 free peptide HPLC: 100% Peptide content: 90.3%

13-NLE MOTILIN, synthetic

(Phe-Val-Pro-Ile-Phe-Thr-Tyr-Gly-Glu-Leu-Gln-Arg-Nle-Gln-Glu-Lys-Glu-Arg-Asn-Lys-Gly-Gln-Gln)
13-2771-02

Lot: Typical

Purity: of peptide material is 100% as confirmed by HPLC **Peptide Content:** 90.3% **m.w.** 2681.1

Amino Acid Analysis: Asp: 1.02; Thr: 1.03; Glu: 5.85; Pro: 1.00; Gly: 1.99; Val: 1.03; Ile: 0.98;
Leu: 0.98; Nle/Tyr: 2.00; Phe: 1.95; Lys: 2.01; Arg: 2.00

Storage: Store dry material at -20°C.

1, 2.5 & 5 mg

MSH see: **ACETYL-SER-TYR-SER.....**

13-8822-03 **MTH-DL-ARG** 100 & 250 mg

13-8823-03 **MTH-DL-ASN** 100 & 250 mg

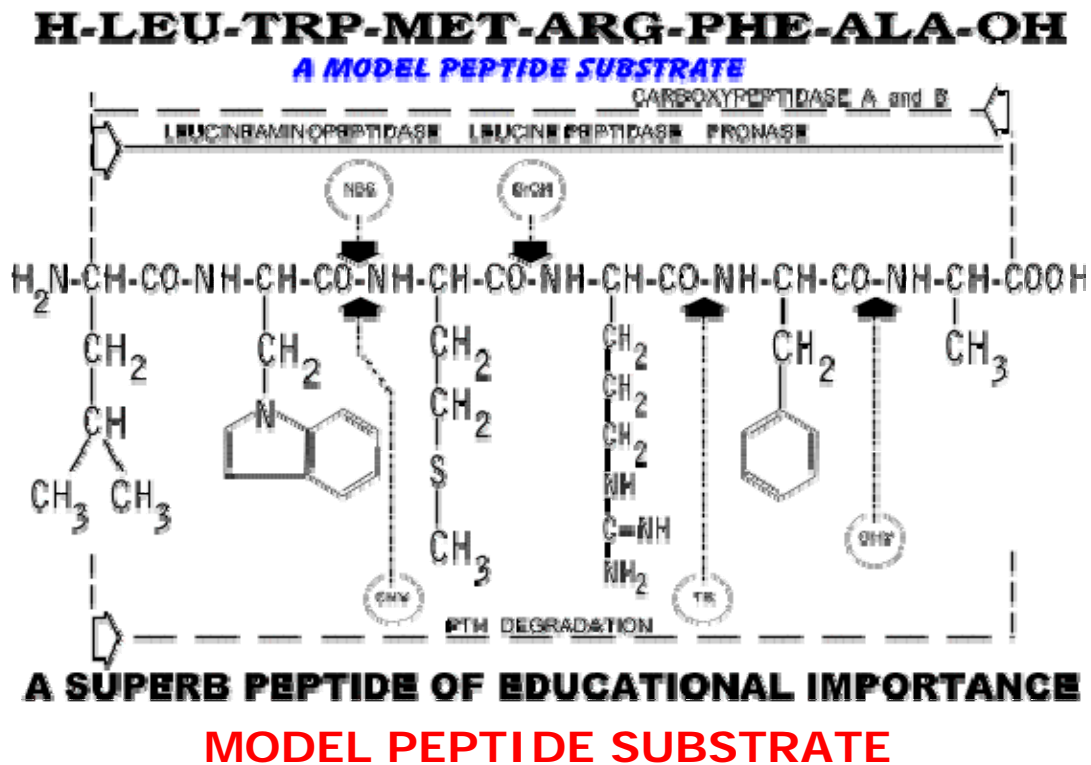
13-8828-03 **MTH-DL-HIS** 100 & 250 mg

13-8832-03 **MTH-e-METHYL THIOCARBAMYL-DL-LYS** 100 & 250 mg

13-8838-03 **MTH-DL-TYR** 100 & 250 mg

13-7316-06 **MTT** 500 mg & 1 gm

(Thiazolyl blue) [298-93-1] m.w. 414.33



Analytical work in the field of peptide and protein chemistry, especially the elucidation of amino acid sequences involves primarily the use of proteolytic enzymes as well as the application of selective chemical cleavage or stepwise degradation methods to break down the amino chain of the product under investigation. The use of such methods demands at first precise knowledge of details of the special technique.

The Model Peptide system offered enables intensive study of such methods. The whole kit consists of a unique, novel combination of peptides and the appropriate free amino acids having the following structures:

1. The hexapeptide Model Substrate (MS): standards

2. A series of nine model peptide

H-LEU-TRP-MET-ARG-PHE-ALA-OH

(Fragments of MS):

- a. **H-LEU-TRP-OH**
- b. **H-LEU-TRP-MET-OH**
- c. **H-LEU-TRP-MET-ARG-OH**
- d. **H-LEU-TRP-MET-ARG-PHE-ALA-OH**
- e. **H-MET-ARG-PHE-ALA-OH**
- f. **H-MET-ARG-PHE-OH**

3. The six free amino acids of which the model substrate is composed:

g. **H-ARG-PHE-ALA-OH**

LEU;TRP;MET;ARG;PHE;ALA

h. **H-PHE-ALA-OH**

j. **H-ARG-PHE-OH**

The Model Substrate was designed in a way that it can be cleaved by the following procedures:

ENZYMATIC DEGRADATION

1. The highly specific enzyme Trypsin, cleaves the peptide bond between the arginine and the phenylalanine residues of MS yielding fragments C and H.
2. Chymotrypsin cleavage occurs preferably at the bonds between the tryptophan and methionine residues with formation of fragment A, free alanine and fragment F, if complete hydrolysis is forced. In case of incomplete cleavage, fragments D and E can also be observed under certain conditions.
3. Aminopeptidase M splits through the entire sequence starting at the N-terminus by subsequent removal of leucine, tryptophan and so forth.
4. Leucineaminopeptidase also removes the amino acids stepwise in the same manner, however with different rates.
5. Carboxypeptidase A starts hydrolysis at the C-terminus and splits alanine and phenylalanine to form fragments D and C.
6. Carboxypeptidase B continues this degradation by removal of arginine from fragment C to yield fragment B.
7. Pronase, which was proved to consist of a mixture of aminopeptidases, carboxypeptidases and rather unspecific endopeptidases, cleaves the substrate in different ways depending on the enzyme function being used.

CHEMICAL CLEAVAGE

1. Cyanogen bromide cleaves the peptide bond between the methionine and arginine residues specifically with formation of a modified fragment B (methionine is converted to homoserine lactone) and of fragment G.
2. N-Bromosuccinimide selectively splits the bond between the tryptophan and methionine residues producing fragment E and a modified fragment A (tryptophan is oxidized to dioxindole alanine).
3. Reaction with phenylisothiocyanate at the N-terminus and subsequent removal of leucine as phenylthiohydantoin, well known as Edman degradation, can be repeated thus degrading the entire sequence. (see our **PTH amino acids**).

In addition to each Edman degradation step any remaining fragment (as well as the uncleaved model substrate or fragments E, G and H) may be used to study modern methods to determine N-terminal amino acids, such as the widely used Dansyl technique and the Edman-Dansyl combination procedure.

The whole model peptide system may therefore be used to study, test and train all methods described. It might be useful for students as well as for those research workers who start using any of these standard procedures.

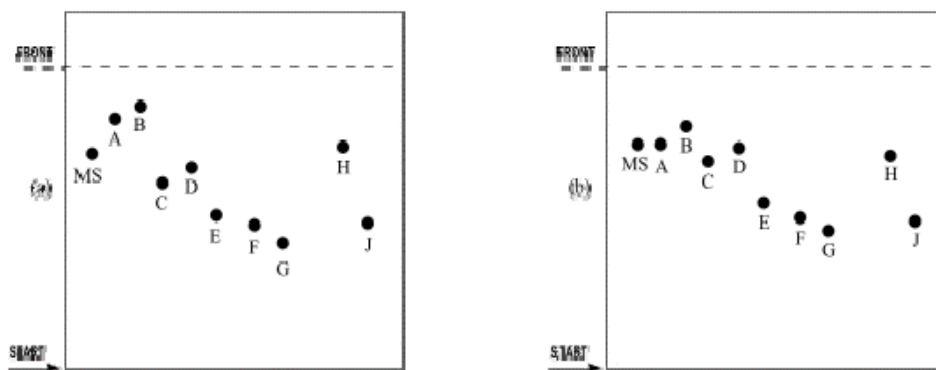
In addition to the educational applicability, the model peptide system offers a wide use for any modern research work, whenever new enzymatic or chemical methods of peptide chain degradation are to be studied or

examined. Last but not least the system represents a very sensitive tool for advanced and sophisticated research workers during the examination of the specificity of newly formed proteolytic enzymes or the search for such enzymes in all kinds of biological systems.

EXPERIMENTAL

In order to study any of the above mentioned reactions the model substrate (MS) is cleaved and the fragments obtained are identified qualitatively or semi-qualitatively by means of thin layer chromatography or electrophoresis in comparison to the respective authentic model peptide standards (A to J) and amino acids. For quantitative studies the exact amount of fragments may be determined by ion exchange chromatography using well established equipment such as automatic amino acid analyzers adjusted for peptide separations. In typical examples the separation of (MS) and of all standards by means of thin layer chromatography in two systems is demonstrated as well as the enzymatic cleavage of (MS) by trypsin.

a) Thin Layer Chromatography:



Thin layer chromatograms of the model substrate (MS) and of the model peptide standards A, B, C, D, E, F, G, H and J, in the systems:

a) n-Butanol / acetic acid / water (3:1:1; v / v)

b) n-Amyl alcohol / pyridine / water (35:35:30; v / v) staining with Ninhydrin

About 50 ug of (MS) and of each peptide standard are dissolved in 0.1 ml. methanol-water mixture (1:1; v/v). 10 ul of each solution are then pipetted on a thin layer plate coated with silica-gel. In two solvent systems, separation is possible as indicated below:

b) Enzymatic cleavage by trypsin:

The digestion of (MS) by trypsin can be carried out at 25C in 0.2M ammonium acetate buffer, adjusted to pH 7.0 by addition of acetic acid. 0.5 mgs. of (MS) are dissolved in 0.1 ml. MeOH and 1.0 ml. buffer solution and a solution of 0.02 mg. of trypsin in 1 ml. buffer is added.

The incubation mixture is kept for four hours at 25oC; hereafter enzymatic degradation is stopped by addition of 0.5 ml. glacial acetic acid and the mixture is lyophilized to remove the volatile buffer.

The remaining residue is dissolved in 0.5 ml. methanol/water mixture (1:1;v/v) and 10 ul of this solution is submitted to thin layer chromatography with the set of standards as described under (a).

12-4350-02	H-LEU-TRP-MET-ARG-PHE-ALA (MS)	50 mg
12-4351-02	H-LEU-TRP (fragment A)	50 mg
12-4352-02	H-LEU-TRP-MET (fragment B)	50 mg
12-4353-02	H-LEU-TRP-MET-ARG (fragment C)	50 mg
12-4354-02	H-LEU-MET-MET-ARG-PHE (fragment D)	50 mg
13-4794-02	H-MET-ARG-PHE-ALA (fragment E)	50 mg
13-4811-02	H-MET-ARG-PHE (fragment F)	50 mg
01-0268-02	H-ARG-PHE-ALA (fragment G)	50 mg
16-5916-02	H-PHE-ALA (fragment H)	50 mg
01-0315-02	H-ARG-PHE (fragment J)	50 mg

or items may be ordered as a kit;

13-4879-12 **MODEL PEPTIDE SUBSTRATE KIT:**

50 mgs. of MS plus 10 mgs. of each of the standards and
1 gm. each of Leu;Trp;Met;Arg;Phe;Ala

13-4795-13 **MODEL PEPTIDE STANDARDS (fragments only) KIT:**

50 mgs. of each of the nine standards

N

14-5270-07	b-NAD oxidized m.w. 717.5	500 mg & 1 gm
14-5207-07	b-NADH (90%) m.w. 763.4	100 & 500 mg
14-5271-07	b-NADH Disodium (98-99%) m.w. 763.4	100 mg & 1 gm
14-5244-07	b-NADP (98-99%) m.w. 837.0	50 & 250 mg
14-6157-21	NALADIXIC ACID [389-08-2] m.w. 232.2	5 & 25 gm
14-3660-03	a-NAPHTHYL acetate [830-81-9] m.w. 186.21	1 & 5 gm
14-3662-03	b-NAPHTHYL acetate [1523-11-1] m.w. 186.21	5 & 10 gm
14-3661-03	a-NAPHTHYL-N-ACETYL-b-D-GLUCOSAMINIDE m.w. 347.37	50 & 100 mg
14-2430-06	a-NAPHTHYLAMINE [134-32-7] m.w. 143.18	50 gm
14-8765-03	b-1-NAPHTHYL ALANINE m.w. 215.25	100 & 250 mg
14-7436-06	di-b-NAPHTHYL CARBAZONE	500 mg & 1 gm
14-3663-06	b-NAPHTHYL LAURATE [6343-73-3] m.p. 58-60°C	1 & 5 gm
14-3664-06	b-NAPHTHYL MYRISTATE m.w. 354.53	1 & 5 gm
14-3665-06	a-NAPHTHYLPHOSPHATE sodium salt [81012-88-7] m.w. 246.13	1 & 5 gm

14-3667-06	b-NAPHTHYL STEARATE m.w. 410.64	1 & 5 gm
14-9065-17	NARCEIN [131-28-2] m.w. 445.45 m.p. 170-172°C	1 gm
14-5556-06	NEOCUPROINE Hcl monohydrate [7296-20-0] m.p. 235-238°C	1 & 5 gm
14-7565-02	a-NEOENDORPHIN 1-8 (Tyr-Gly-Gly-Phe-Leu-Arg-Trp)	1 mg
14-7566-02	b-NEOENDORPHIN (Tyr-Gly-Gly-Phe-Leu-Arg-Lys-Tyr-Pro)	1 mg
14-8020-17	NEOHESPERIDIN (Pr.) m.p. 240°C	100 & 250 mg
14-6158-21	NEOMYCIN SULFATE [1405-10-3] 750 mcg.Neomyucin base/mg.	1 & 10 gm
16-7567-02	NERVE GROWTH FACTOR 99-115 MOUSE (Pro-Glu-Ala-His-Trp-Lys-Leu-Gln-His-Ser-Leu-Asp-Thr-Ala-Leu-Arg)	1 mg

NEUROKININS / NEUROMEDINS

08-2366-02	NEUROKININ A (Neuromedin L) (Substance K) (His-Lys-Thr-Asp-Ser-Phe-Val-Gly-Leu-Met NH ₂)	1 mg
01-2336-02	NEUROKININ B (Neurokinin K) (Asp-Met-His-Phe-Phe-Val-Gly-Leu-Met NH ₂)	1 & 5 mg
14-8227-02	NEUROMEDIN B (Gly-Asn-Leu-Trp-Ala-Thr-Gly-His-Phe-Met NH ₂) m.w. 1132.46	1 mg
14-7570-02	NEUROMEDIN C (Gly-Asn-His-Trp-Ala-Val-Gly-His-Leu-Met-NH ₂) m.w. 1120.47	1 mg
12-7571-02	NEUROMEDIN N (Lys-Ile-Pro-Tyr-Ile-Leu)	1 mg

14-7572-02	NEUROMEDIN U-8 (Tyr-Phe-Leu-Phe-Arg-Pro-Arg-Asn-NH ₂)	0.5 mg
14-7573-02	NEUROMEDIN U-25 (Phe-Lys-Val-Asp-Glu-Glu-Phe-Gln-Gly-Pro-Ile-Val-Ser-Gln-Asn-Arg-Arg-Tyr-Phe-Leu-Phe-Arg-Pro-Arg-Asn-NH ₂)	0.5 mg
14-7574-02	NEUROPEPTIDE K (Asp-Ala-Asp-Ser-Ser-Ile-Glu-Lys-Gln-Val-Ala-Leu-Leu-Lys-Ala-Leu-Tyr-Gly-His-Gly-Gln-Ile-Ser-His-Lys-Arg-His-Lys-Thr-Asp-Ser-Phe-Val-Gly-Leu-Met NH ₂)	0.5 mg
04-7575-02	NEUROPEPTIDE Y (PORCINE) (Tyr-Pro-ser-Lys-Pro-Asp-Asn-Pro-Gly-Glu-Asp-Ala-Pro-Ala-Glu-Asp-Leu-Ala-Tyr-Tyr-Ser-Ala-Leu-Arg-His-Tyr-Ile-Asn-Leu-Ile-Thr-Arg-Gln-Arg-Tyr NH ₂) [82785-45-3]	0.5 mg

NEUROPHYSIN

A high molecular weight material found in the posterior pituitary gland of Ox infundibulum was reported by Osborne and Vincent (1) in 1900. In 1928 Kamm, et al (2) and in 1940, Rosenfeld (3) characterized the proteinaceous material which possessed pressor activity. In 1955 Archer, et al (4) working from previous efforts of Black and van Dyke (5) confirmed a non-covalent binding of hormone to protein.

The protein was given the name Neurophysin.

In 1966, Frankland, et al (6) studying the homogeneity of the protein established the presence of four elements attributable to the action of proteolytic enzymes during extraction.

The relationships between Neurosecretory Material (NSM) with the magnocellular hypothalamic nuclei and neurosecretory axon of the hypothalamoneurohypophysial system (HNS) and Neurophysin was reported by Watkins, W.B. (7) using an Immunohistochemical demonstration. In 1977, V.J.Choy and W.B.Watkins, W.B. (8) reported on an immunochemical study of the hypothalamo-Neurophysial system and the distribution of Neurophysin, Vasopressin and Oxytocin in rat.

Neurophysin has been isolated from Rat, Guinea Pig, Sheep and Man. In Ox and Pig, Neurophysin possesses Neurophysin I and II and a minor amount of III. Sheep Neurophysin contains Neurophysins and a minor amount of I and II (9).

Since the Neurophysins are present in the subcellular particles indicates that they may be involved in the mechanism for storage and release of the hormone present. Research Plus is now able to offer a selection of Neurophysins for continuing research. We are also able to offer Anti-Porcine Neurophysin for immunological efforts.

REFERENCES:

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7. Watkins,W.B.,Int'l Rev. of Cytology 41,241-284 (1975).
8. Choy, V.J. and Watkins, W.B., Cell & Tissue Res., 180, 467-490 (1977).
9. Watkins,W.B., J.Endocrin. 59, 17-29 (1973) (Gr.Brit.)

14-9842-02 **NEUROPHYSIN II**, Pig. lyoph. 250 ug

(Isoelectric pt. 4.4-6.0)

14-9843-02 **ANTI-PORCINE NEUROPHYSIN II**, Rabbit, Lyoph. 0.5 & 1.0 ml

(Eval. by PAP. Gives a strong & specific immonreaction when used in

dilutions up to 1:2000 & incubated with the approp. tissue for 30 min @ 37°C)

NEUROTENSIN see: **PYRGLU-LEU-TYR-GLU-ASN-LYS-PRO-ARG-ARG-PRO-TYR-ILE-LEU**

13-7937-25	NICOTINAMIDE 98% (B2 complex) [98-92-0] m.w. 122.13 m.p. 130-133°C	50 & 100 gm
14-5245-07	NICOTINAMIDE MONONUCLEOTIDE m.w. 370.2	10 mg
14-9067-17	(-) NICOTINE 99% [54-11-5] m.w. 162.23	5 gm
14-9068-17	NICOTINE HYDROGEN-L-TARTRATE [65-31-6] m.p. 90°C	50 & 100 gm
14-9069-17	NICOTINE SALICYLATE [29790-52-1] m.p. 117-118°C	5 gm
13-7938-25	NICOTINIC ACID 98% (Niacin) [59-67-6] m.w. 123.11 m.p. 236-239°C	50 & 100 gm
14-9071-17	b-NICOTYRINE 95% ((3-(1)-Methylpyrrol-2-yl)-pyridine) [487-19-4] m.w. 158.20 b.p. 150-151°C	100 & 250 mg
14-3770-06	NINHYDRIN [485-47-2] off-white to cream	100 & 500 mg

2-NITRO-4-AMINO BENZOIC ACID see: **4-AMINO-2-NITRO BENZOIC ACID**

3-NITRO-2-AMINO BENZOIC ACID see: **2-AMINO-3-NITRO BENZOIC ACID**

14-4581-03	DL-NITRO ARGININE	500 mg & 1 gm
14-4582-03	NITRO-L-ARGININE METHYLESTER	100 & 500 mg
14-8767-03	p-NITROBENZOYL GLYCYL GLYCINE [78196-53-9] m.w. 281.10 m.p. 217-218°C	1 & 10 gm
14-1420-07	S-(p-NITROBENZYL)-6-THIOGUANOSINE [13153-27-0] m.w. 434.43 m.p. 199-201°C CHR Pure	10 & 25 mg
14-1421-07	S-(p-NITROBENZYL)-6-THIOINOSINE [38048-32-7] m.w. 419.42 m.p. 189-191°C CHR Pure	10 & 25 mg

14-7472-06	6-NITRO-3-HYDROXY BENZALDHYDE [42454-06-8]	1 & 5 gm
14-5205-06	3-NITRO-4-HYDROXYBENZOIC ACID (NHB)	1 & 5 gm
14-3668-06	p-NITROPHENYL acetate crystalline [830-03-5] m.w. 181.15 m.p. 81-82°C	1 & 10 gm
14-5266-04	p-NITROPHENYL acetyl-b-D-GLUCOSAMINIDE [3459-18-5] m.w. 342.3	100 mg & 1 gm
14-8491-04	p-NITROPHENYL-a-L-FUCOSIDE m.w. 285.3	25 & 100 mg
14-3669-04	p-NITROPHENYL-a-D-GLUCOPYRANOSIDE [3767-28-0] m.w. 301.3	500 mg & 1 gm
14-3671-04	p-NITROPHENYL-b-D-GLUCURONIDE	50 & 100 mg
14-8486-04	meta-NITROPHENYL-b-D-GLUCOPYRANOSIDE m.w. 301.3	1 & 5 gm
14-5268-04	p-NITROPHENYL acetyl-b-D-GLUCOSAMINIDE [3459-18-5] m.w. 342.3	100 mg & 1 gm
14-4940-06	p-NITROPHENYL-p-GUANIDINO BENZOATE m.w. 300.27	500 mg & 1 gm
14-7443-06	p-NITROPHENYL LAURATE [1956-11-2] m.w. 321.42	1 & 5 gm
14-8467-04	p-NITROPHENYL-b-D-MALTOSIDE m.w. 463.4	25 & 100 mg
14-8489-04	p-NITROPHENYL-a-D-MELIBIOSE m.w. 463.4	10 & 25 mg
14-5250-06	p-NITROPHENYL PHOSPHATE Disodium	1 & 10 gm
14-8490-04	p-NITROPHENYL-a-RHAMNOSIDE m.w. 285.3	100 & 250 mg
14-3673-06	p-NITROPHENYL SULFATE potassium salt [6217-68-1] m.w. 257.26	500 mg & 1 gm

14-5558-03	p-NITRO TETRAZOLIUM BLUE [298-83-9]	500 mg & 1 gm
14-8773-03	3-NITRO-L-TYROSINE [621-44-3] m.w. 226.19	5 & 25 gm
14-1088-21	NONACTIN (S. griseus) m.w. 736.94	25 mg
14-5758-16	NONYL SODIUM SULFONATE m.w. 230.31	5 & 10 gm
14-5210-03	L-NORLEUCINE [327-57-1] m.w. 131.17 m.p. 310°C	500 mg & 1 gm
14-5212-03	DL-NORLEUCINE [616-06-8] m.w. 131.17 m.p. 327°C	5 & 25 gm
14-9073-17	DL-NORNICOTINE , synth. (98.5% by GC) m.w. 148.21	50 & 250 mg
14-5213-03	L-NORVALINE [6600-40-4] m.w. 117.15 m.p. 305°C	500 mg & 1 gm
14-5215-03	DL-NORVALINE [760-78-1] m.w. 117.15	5 & 25 gm
14-6160-21	NOVOBIOCIN Sodium salt [1476-53-5] m.w. 634.6	1 & 10 gm
14-5221-03	N-o-NPS-O-t-BUTYL-L-SER DHCA salt m.w. 495.69	100 & 250 mg
14-5226-03	N-o-NPS-GLY m.w. 409.54	100 & 250 mg
14-5231-03	N-o-NPS-L-PRO DCHA salt m.w. 449.61	100 & 250 mg
14-5232-03	N-o-NPS-L-SER DCHA salt m.w. 439.58	100 & 250 mg

14-9555-18 **NUCLEOSIDE PHOSPHORYLASE**

1 & 5 mg

(Calfspleen)

[9059-37-4] E.C.2.4.2.1 susp. 3.2M/l.amm.sulf, pH6 Act: 20U/mg

O

15-5606-16	OCTADECYL SODIUM SULFATE [1120-04-3] m.w. 372.55	5 & 10 gm
15-5613-16	OCTADECYL SODIUM SULFONATE m.w. 388.56	5 & 10 gm
15-5607-16	OCTYL SODIUM SULFATE [18981-98-1] m.w. 232.28	5 & 10 gm
15-5614-16	OCTYL SODIUM SULFONATE m.w. 216.28	5 & 10 gm
15-5603-03	L-ORNITHINE Monohydrochloride [3184-13-2] m.w. 168.62 m.p. 245°C dec.	10 & 100 gm
15-7582-03	L-ORNITHINE METHYLESTER DIHCl m.w. 219.11	1 & 5 gm
16-7583-02	L-ORN-b-NAPHTHYLAMIDE CARBONATE monohydrate	100 & 250 mg
15-5604-03	D-ORNITHINE Monohydrochloride [16682-12-5] m.w. 168.62 m.p. 239°C	1 & 10 gm
15-6302-02	L-ORNITHINE-b-ALA HCl m.w. 203.1 C: 47.05 H: 8.32 N: 20.46	10 & 25 mg
15-5128-02	L-ORN-ORN salt m.w. 246.29 free peptide	25 & 50 mg
15-5129-02	L-ORN-ORN-ORN salt m.w. 360.43 free peptide	25 & 50 mg
15-2906-02	OSTEOCALCIN (7-19) HUMAN (Gly-Ala-Pro-Val-Pro-Tyr-Pro-Asp-Pro-Asp-Pro-Leu-Glu-Pro-Arg)	1 mg
15-2905-02	OSTEOCALCIN (37-49) HUMAN (Gly-Pro-Gln-Glu-Ala-Tyr-Arg-Arg-Phe-Tyr-Gly-Pro-Val)	1 mg

P

16-7586-02	PANCREATIC POLYPEPTIDE (AVIAN) (Gly-Pro-Ser-gln-Pro-Thr-Tyr-Pro-Gly-Asp-Asp-Ala-Pro-Val-Gly-Asp-Leu-Ile-Arg-Phe-Tyr-Asp-Asn-Leu-Gln-Gln-Tyr-Leu-Asn-Val-Val-Thr-Arg-His-Arg-Tyr-NH ₂) m.w. 4238.23	0.5 mg
16-7587-02	PANCREATIC POLYPEPTIDE (BOVINE) (Ala-Pro-Leu-Glu-Pro-Glu-Tyr-Pro-Gly-Asp-Asp-Ala-Thr-Pro-Glu-Gln-Met-Ala-Gln-Tyr-Ala-Ala-Glu-Leu-Arg-Arg-Tyr-Ile-Asn-Met-Leu-Thr-Arg-Pro-Arg-Tyr-NH ₂)	0.5 mg
16-6189-30	PANCREATIN, 4X [8049-47-6] USP	100 gm & 1 kg
16-2640-30	PANCRELIPASE USP	100 gm & 1 kg
22-3260-25	PANGAMIC ACID (Vitamin B15) [11006-56-7]	1 & 10 gm
16-7914-25	PANTOTHENIC ACID, Calcium salt [137-08-6] m.w. 476.54 m.p. 198-201°C	10 & 100 gm
16-7940-25	D-PANTOTHENOL [81-13-0] m.w. 205.26	5 & 25 gm
16-5926-18	PAPAIN (C.papaya) [9001-73-4] EC 3.4.22.2 Susp. sod. acetate buffer Act: 30U./mg.	100 mg
16-2600-06	PARAOSANILINE HCl C.I. 42500	1 & 5 gm
16-6300-02	PARATHYROID HORMONE, HUMAN (53-84) [9002-64-6] m.w. 3512.4	0.5 mg
16-0470-02	PARATHYROID HORMONE (1-34) Bovine	0.5 mg
16-0469-02	PARATHYROID HORMONE (1-34) Human	0.5 mg
16-0468-02	PARATHYROID HORMONE (1-34) Rat	0.5 mg

16-0471-02	PARATHYROID RELATED PROTEIN (1-16)	0.5 mg
16-0472-02	PARATHYROID RELATED PROTEIN (1-34) (Hypercalcemia of malignancy factor) m.w. 4017.55	0.5 mg
16-0473-02	PARATHYROID RELATED PROTEIN (1-40) (Hypercalcemia of malignancy factor)	0.5 mg
16-6185-30	PARATHYROID SUBSTANCE	5 & 10 gm
16-5979-06	PATTON AND REEDER'S INDICATOR (Calcon Carboxylic acid) m.w. 438.41	1 & 5 gm
16-8238-06	D(-) PENICILLAMINE 99% [52-67-5] m.w. 149.21 m.p. 212°C dec.	1 & 10 gm
16-5866-16	PENTADECYL SODIUM SULFATE m.w. 330.47	5 & 10 gm
16-6020-16	PENTADECYL SODIUM SULFONATE m.w. 346.48	5 & 10 gm
16-5867-16	PENTYL SODIUM SULFATE m.w. 190.20	5 & 10 gm
16-5932-18	PEPSIN (Swine stomach mucosa) lyoph. Act: 2500 U./mg. lyoph. material	1 gm
16-5928-18	PEPSIN 1:3000 , NF powder [9001-75-6] EC 3.4.23.1	100 & 500 gm
16-5929-18	PEPSIN 1:6000 powder EC 3.4.23.1	500 gm & 1 kg
16-5930-18	PEPSIN 1:10000 powder EC 3.4.23.1	500 gm & 1 kg
16-5931-18	PEPSIN 1:5000 powder EC 3.4.23.1	100 & 500 mg
16-7590-02	PEPTIDE E (Tyr-Gly-Gly-Phe-Met-Arg-Arg-Val-Gly-Arg-Pro-Glu-Trp-Trp-Met-Asp-Tyr-Gln-Lys-Arg-Tyr-Gly-Gly-Phe-Leu)	0.5 mg

16-7591-02	PEPTIDE T (Ala-Ser-Thr-Thr-Thr-Asn-Tyr-Thr)	1 mg
16-7592-02	(D-ALA¹) PEPTIDE T AMIDE (D-Ala-Ser-Thr-Thr-Thr-Asn-Tyr-Thr-NH ₂)	1 mg
16-7593-02	PEPTIDE VQY (Porcine) Val-Gln-Tyr-Pro-Val-Glu-His-Pro-Asp-Lys-Phe-Leu-Lys-Phe-Gly-Met-Thr-Pro-Ser-Lys-Gly-Val-Leu-Phe-Tyr	0.5 mg
16-7594-02	PEPTIDE YY (Porcine) (Tyr-Pro-Ala-Lys-Pro-Glu-Ala-Pro-Gly-Glu-Asp-Ala-Ser-Pro-Glu-Glu-Leu-Ser-Arg-Tyr-Tyr-Ala-Ser-Leu-Arg-His-Tyr-Leu-Asn-Leu-Val-Thr-Arg-Gln-Arg-Tyr NH ₂)	0.5 mg
16-7093-17	PERILLAL ALDEHYDE 98% [2111-75-3] m.w. 150.21	1 gm
16-8308-17	PERUVOSIDE (Cannogennin-a-l-thevetoside) m.w. 548.65	10 mg
16-7094-17	PFEFFERMINZOEL	50 ml
16-8775-06	PHENAZINE METHOSULFATE 99% [299-11-6] m.w. 306.34	1 & 10 gm
16-5923-06	PHENOLPHTHALEIN DIPHOSPHATE free acid m.w. 512.3	250 & 500 mg
16-5813-03	L-PHENYLALANINE [63-91-2] m.w. 165.19 m.p. 270-275°C	25 & 100 gm
16-8777-03	L-PHENYLALANINE NH₂ Hbr m.w. 245.12 m.p. 250-253°C	1 & 10 gm
16-4585-03	L-PHENYLALANINE BENZYLESTER-p-TOSYLATE m.w. 426.51 m.p. 171-173°C	500 mg & 1 gm
16-4586-03	L-PHENYLALANINE-t-BUTYLESTER	1 & 10 gm

16-5818-03	L-PHENYLALANINE ETHYLESTER Hcl [3182-93-2] m.w. 229.71 m.p. 155-156°C	1 & 10 gm
16-5819-03	L-PHENYLALANINE METHYLESTER Hcl [7524-50-7] m.w. 215.68 m.p. 158-162°C	1 & 10 gm
16-5821-03	L-PHENYLALANINE-b-NAPHTHYLAMIDE m.w. 290.37 m.p. 129-131°C	500 mg & 1 gm
16-5815-03	D-PHENYLALANINE [673-06-3] m.w. 165.19 Assay: 99.9%	1 & 10 gm
16-4584-02	D-PHENYLALANINE BENZYLESTER	100 & 250 mg
16-4587-03	D-PHENYLALANINE ETHYLESTER HCl	100 & 250 mg
16-5816-03	DL-PHENYLALANINE m.w. 165.19 m.p. 266-267°C	25 & 100 gm
16-4583-06	D-PHENYLALANINE-2-AMINO FLUORENE	100 & 250 mg
16-5916-02	L-PHE-ALA .1/4 H₂O [3918-87-4] m.w. 240.75	50 & 100 mg
16-8780-02	L-PHE-b-ALA [54745-27-6] m.w. 236.27	100 & 250 mg
16-6021-02	L-PHE-L-ARG.H₂SO₄ m.w. 321.38 (free pep.) C: 46.45 H: 6.24 N: 17.48 S: 5.73	50 & 100 mg
16-5130-02	L-PHE-ARG-SER-VAL acetate m.w. 567.63	25 & 50 mg
16-6201-02	PHE-ARG-TRP-GLY-LYS-PRO-VAL-GLY-TYR (Tyr¹⁵) ACTH 7-15	1 mg
16-7146-02	PHE-ASN-LEU-PRO-LEU-GLY-ASN-TYR-LYS-LYS-PRO (Fibroblast Acidic Growth Factor frag. 1-11)	1 mg
16-5854-02	L-PHE-ASP-ALA-SER-VAL .1/2 H₂O (C-terminal pentapeptide of RNase) m.w. 537.6	25 & 100 mg
16-3676-02	L-PHE-GLY monohydrate [721-90-4] m.w. 240.24	100 & 250 mg

16-8896-02	L-PHE-GLY-PRO-GLU-THR-PRO NH₂ (Thyrocalcitonin 27-32) m.w. 663.73	25 & 100 mg
16-5131-02	L-PHE-LUE m.w. 278.35	100 & 250 mg
16-5132-02	L-PHE-LEU NH₂.Hbr m.w. 375.28	50 & 100 mg
16-8089-02	PHE-LEU-GLU-GLU-LEU (Vitamin K dependent corboxylase substrate)	5 mg
14-7573-02	PHE-LYS-VAL-ASP-GLU-GLU-PHE-GLN-GLY-PRO-ILE-VAL-SER-GLN-ASN-ARG-ARG-TYR-PHE-LEU-PHE-ARG-PRO-ARG-ASN-NH₂ (Neuromedin U-25)	0.5 mg
16-5855-02	L-PHE-MET m.w. 296.39	100 & 250 mg
16-7738-03	L-PHE-4-METHOXY-b-NAPHTYLAMIDE (Aminopeptidase M substrate)	10 & 25 mg
16-5856-03	L-PHE-PHE m.w. 312.37 [2577-40-4]	100 & 250 mg
16-6030-02	L-PHE-D-PHE m.w. 312.37	25 & 50 mg
16-6031-02	D-PHE-L-PHE m.w. 312.37	25 & 50 mg
16-6032-02	D-PHE-D-PHE m.w. 312.37	25 & 50 mg
19-7671-02	PHE-PHE-GLY-LEU-MET-NH₂ (Substance P (7-11))	1 mg
16-3677-02	L-PHE-PHE-PHE m.w. 294.35	50 & 100 mg
16-3678-02	L-PHE-PHE-PHE-PHE m.w. 606.72	50 & 100 mg

16-3679-02	L-PHE-PHE-PHE-PHE-PHE m.w. 753.90	25 & 50 mg
16-5133-02	L-PHE-L-PRO m.w. 262.29	50 & 100 mg
16-8477-02	D-PHE-PRO-ARG-5-AMIDO-ISOPHTHALIC ACID-DIMETHYLESTER.2 acetate (Heparin substrate)	10 & 25 mg
16-4201-02	H₂N-PHE-SER-TRP-GLY-ALA-GLU-GLY-GLN-ARG.COOH (Frag. 114-122 human Myelin protein) (EAE Nonpep)	0.5 & 1.0 mg
16-5134-02	L-PHE-SER-VAL m.w. 351.39	25 & 50 mg
16-5857-02	L-PHE-VAL-GLN-TRP-LEU-MET-ASN-THR (Glucagon 21-29) m.w. 1039.3	25 & 50 mg
16-5135-02	L-PHE-TYR NH₂ HCL m.w. 362.82	50 & 100 mg
16-4583-06	D-PHENYLALANYL-2-AMINO FLUORENE	100 & 250 mg
16-5970-02	4-PHENYLAZOBENZYLOXYCARBONYL-L-PRO-LEU-GLY-PRO-D-ARG dihydrate (Collagenase substrate-A)	25 & 50 mg
16-3680-02	4-PHENYLAZOBENZYLOXYCARBONYL-L-PRO-L-LEU (Collagenase Substrate-B)	25 & 50 mg
16-8032-06	PHENYLBORONIC ACID trimeric anhydride m.w. 121.93 m.p. 217-220°C	10 & 50 gm
16-7432-06	PHENYL DIETHYL ACETAMIDO MALONATE	500 mg & 1 gm
16-6392-06	o-PHENYLENE DIAMINE	10 & 25 gm
16-5869-04	PHENYL-β-D-GLUCOPYRANOSIDE dihydrate [14644-4] m.w. 256.36	500 mg & 1 gm
16-2437-06	PHENYLHYDRAZINE HCL	10 gm

16-6033-06	o-PHENYLPHENOL 99%	100 gm
16-5981-06	PHENYLPYRIDYL KETOXIME (sym form)	1 & 10 gm
16-8782-03	DL-b-PHENYLSERINE	1 & 10 gm
	[69-96-5] m.w. 181.19	

H-PHE-VAL-PRO-ILE-PHE-THR-TYR-GLY-GLU-LEU-GLN-ARG-NLE-GLU-GLU-LYS-GLUARG-ASN-LYS-GLY-GLN-OH see: **13-NLE DEAMINO MOTILIN**

16-7447-07	PHOSPHERNOL PYRUVIC tricyclohexylamine dihydrate	100 & 250 mg
	m.p. 197-198°C	
16-8851-03	N-PHTHALYL-L-ALANINE	1 & 10 gm
16-8855-03	N-PHTHALYL-L-GLUTAMIC Anhydride	1 & 10 gm
	[25830-77-7]	
16-8854-03	N-PHTHALYL-DL-GLUTAMIC Anhydride	1 & 10 gm
	m.w. 259.2	
16-8857-03	N-PHTHALYL GLYCINE	5 & 25 gm
	[4702-13-0]	
16-8022-06	a-PICOLINIC ACID Hcl	250 & 500 mg
16-9079-17	PILOSINE	1 gm
	[13640-28-3] m.w. 286.32 m.p. porx. 190°C	
16-7096-17	a-PINEN 98%	1 gm
	[80-56-8] m.w. 136.23	
16-7099-17	b-PINEN 99%	1 gm
	[127-91-3] m.w. 136.23	
16-7425-06	DL-PIPECOLINIC ACID Hcl	500 mg & 1 gm
	[5107-10-8]	
16-6630-17	PLUMBAGAN (P. indica root bark)	100 & 250 mg
	[481-42-5] m.w. 188.17	

16-5906-07	POLYCYTIDYLIC ACID (POLY C) , Potassium salt	10 mg
16-5993-07	POLYXANTHYLIC ACID (POLY X) , Potassium salt	5 mg
16-5994-07	POLY A. POLY U , Double stranded, Physiol. salt	5 mg
16-5995-07	POLY A. POLY U , Double stranded, Sodium salt	5 mg
16-1498-07	POLY (dA) sodium salt, lyoph.	5 U
16-1507-07	POLY (dA) POLY (dT) sodium salt	5 U
16-1509-07	POLY (dG). POLY (dC) sodium salt	5 U
16-1508-07	POLY (dI). POLY (dC) sodium salt	5 U
16-1504-07	POLY (dA-dT). POLY (dA-dT) sodium salt, lyoph.	10 U
16-3800-02	POLY-D-GLU:D-LYS 6:4 (ratio is input ratio:output ratio) m.w. and solubility supplied with analysis	5 mg
16-5822-03	POLY-L-ALANINE m.w. 1500-5000	50 & 100 mg
16-5824-03	POLY-DL-ALANINE [25281-63-4] m.w. 1000-5000	50 & 100 mg
16-5825-03	POLY-L-ARGININE Hcl [26982-20-7] m.w. 10,000-20,000	50 & 100 mg
16-5827-03	POLY-L-ASPARTIC ACID [25608-40-6] m.w. 2500-6000	50 & 100 mg
16-5828-03	POLY-b-BENZYL-L-ASPARTATE [25248-99-1] m.w. 5000-10,000	50 & 100 mg
16-7018-03	POLY-S-CBZ-L-CYSTEINE m.w. 5000-10,000	50 & 100 mg
16-5840-03	POLY-e-CBZ-L-LYSINE m.w. 15,000-75,000	50 & 100 mg
16-5845-03	POLY-d-CBZ-L-ORNITHINE m.w. 4000-20,000	50 & 100 mg
16-5829-03	POLY-L-GLUTAMIC ACID [15513-46-4] m.w. 15,000-50,000	50 & 100 mg

16-5838-03	POLY-L-LYSINE [25988-63-0] Hydrobromide m.w. 70,000+	50 & 100 mg
16-5841-03	POLY-D-LYSINE [27964-99-4 Hydrobromide m.w. 75,000-150,000]	50 & 100 mg
16-5839-03	POLY-L-LYSINE Hydrochloride [28826-16-6] m.w. 300,000	50 & 100 mg
16-5843-03	POLY-L-METHIONINE [26062-47-5] m.w. 30,000-50,000	50 & 100 mg
16-5832-03	POLY-g-METHYL-L-GLUTAMATE [25086-16-2] m.w. 30,000+	50 & 100 mg
16-6164-21	POLY-MIXIN B SULFATE [1405-20-5] 6300 u/mg.	5 & 25 MU
16-5844-03	POLY-L-ORNITHINE HBR [27278-49-0] m.w. 5000-20,000	50 & 100 mg
16-5846-03	POLY-L-PHENYLALANINE [25191-15-5] m.w. 3000-5,000	50 & 100 mg
16-3040-03	POLY-L-PROLINE [25191-13-3] m.w. 1500-15,000	50 & 100 mg
16-5847-03	POLY-L-SERINE [258221-52-7] m.w. prox. 1700	50 & 100 mg

POLYSTYRENE MOLECULAR WEIGHT MARKERS see separate section

16-5849-03	POLY-L-TYROSINE [25619-78-7] m.w. 2000-50,000	50 & 100 mg
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POLYVINYLPIRROLIDONE (PVP) see separate section

16-6631-17	PONGAMOL (P. glabra fruits) [484-33-3] m.p. 128-129°C	100 & 250 mg
16-5841-10	POTASSIUM CHLORIDE , Absolute grade [7447-40-7] m.w. 74.55	500 gm & 1 kg
16-8142-10	POTASSIUM PHOSPHATE , Dibasic [7758-11-4] m.w. 174.18	500 gm & 1 kg
16-8143-10	POTASSIUM PHOSPHATE , Monobasic [7778-77-0] m.w. 136.09	500 gm & 1 kg
16-8144-10	POTASSIUM PYROPHOSPHATE [7320-34-5] m.w. 384.39	500 gm & 1 kg
16-7599-02	PRE ANGIOTENSINOGEN (1-14) HUMAN Asp-Arg-Val-Tyr-Ile-His-Pro-Phe-His-Leu-Val-Ile-His-Asn	1 mg
16-7658-02	PRE ANGIOTENSIN 11-14, Human Val-Ile-His-Asn acetate	1 mg

PREPROENKEPHALIN 128-140 see: **GLY-GLY-GLU-VAL....**

16-5814-03	L-PROLINE [147-85-3] m.w. 115.13 m.p. 228-233°C dec.	25 & 100 gm
16-5817-03	DL-PROLINE [609-36-9] m.w. 115.13 m.p. 208-210°C	1 & 10 gm
16-1914-03	L-PROLINEAMIDE	500 mg & 1 gm
16-7155-02	PRO-ALA-LEU-PRO-GLU-ASP-GLY-GLY-SER-GLY-ALA-PHE-PRO-PRO-GLY-HIS-PHE-LYS-ASP-PRO-LYS-ARG-LEU-TYR (Fibroblast Basic Growth Factor frag 1-24)	1 mg
16-3682-02	L-PRO-GLU m.w. 262.26 m.p. 216-218°C	100 & 250 mg

L-PRO-GLU-NH₂ see: **PRO-ISOGLN**

16-7567-02	PRO-GLU-ALA-HIS-TRP-LYS-LEU-GLN-HIS-SER-LEU-ASP-THR- ALA-LEU-ARG (Nerve Growth Factor 99-115 Mouse)	1 mg
16-3683-02	L-PRO-GLN [2578-57-6] m.w. 243.26	100 & 250 mg
16-5136-02	PRO-GLN-GLN-PHE-PHE-GLY-LEU-MET-NH₂ SUBSTANCE P (4-11)	1 mg
16-7669-02	D-PRO-GLN-GLN-D-TRP-PHE-D-TYR-LEU-MET-NH₂ (D-Trp ⁴ , D-Trp ^{7,8}) Substance P 4-11	1 mg
16-8784-02	L-PRO-GLY-GLY (Subst. for bov. kidney aminopeptidase) [7561-25-3] m.w. 229.24	100 & 250 mg
16-3685-02	L-PRO-HYPRO-PRO m.w. 228.25	50 & 100 mg
16-7663-02	PRO INSULIN C-PEPTIDE (33-63) HUMAN	0.5 mg
16-7740-02	PRO-LEU-ALA-ARG-THR-LEU-SER-VAL-ALA-GLY-LEU-PRO- GLY-LYS-LYS (CA ²⁺ /Calmodulin dependent protein kinase substrate)	1 mg
16-5976-02	L-PRO-LEU-GLY NH₂ hemihydrate (Melanostatin) m.w. 309.37 (MSH Rel. Inhib. factor)	1 & 5 gm
16-7886-03	L-PRO-b-NAPHTHYLAMIDE HCl (Prolyl aminopeptidase substrate)	100 & 250 mg
16-7887-03	L-PRO-p-NITROANILIDE (Prolyl aminopeptidase substrate)	25 & 50 mg
16-6027-02	L-PRO-PHE-ARG.CH₃COOH m.w. 478.56 C: 54.86 H: 6.99 N: 17.18	25 & 50 mg
16-3687-02	L-PRO-PRO m.w. 212.25 C: 55.80 H: 7.64 N: 12.88 rot: -165° c=0.5 H ₂ O	100 & 250 mg

16-5141-02	L-PRO-PRO-GLY-PHE-SER-PRO (Bradykinin 2-7) m.w. 600.64	5 & 10 mg
02-6239-02	PRO-PRO-GLY-PHE-SER-PRO-PHE-ARG ((Des Arg ¹) Bradykinin)	5 mg
16-3688-02	L-PRO-PRO-PRO amorphous powder m.w. 309.37 C:58.54 H:7.72 N:13.26	50 & 100 mg
16-2331-02	L-PRO-PRO-PRO-PRO m.w. 424.5 C:56.76 H:7.45 N:13.17	25 & 50 mg
16-2330-02	L-PRO-PRO-PRO-PRO-PRO-PRO (Hexapro) m.w. 600.67 C:59.68 H:7.34 N:13.85 rot: -376° H ₂ O	25 & 50 mg
16-5140-02	L-PRO-VAL-GLY m.w. 271.30	25 & 50 mg

b-PROPIOLACTONE 95%

C₃H₄O₂ (Oxetanone-2;hydracrylic acid lactone)

16-9400-06

beta Propiolactone has been generally unavailable due to the difficulty in synthesis and purification, much less stability.

The product has been reported to be a potential virus-inactivator in AIDS research. It is also known as a disinfectant and has been used in place of acrylic acid in Diels-Alder diene synthesis.

beta Propiolactone is listed as a carcinogen by the EPA and is classified as a poison.

m.w. 72.1

Colorless liquid Assay: Min.95% (impurities:Acetic acid; acetic anhydride)

Verified by NMR Storage: -20° C

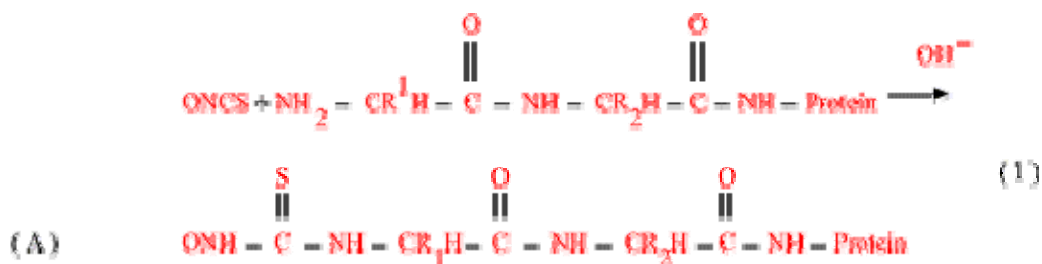
1 & 10 ml

16-8309-17	PROSCILLARIDIN A m.w. 530.6 m.p. 215°C rot: -85° c=1 MeOH	10 mg
16-7011-06	PROTAMINE SULFATE (Salmine) [9009-65-8]	5 & 25 gm
16-6244-18	PROTEASE Neutral (B.polymyxa) lyoph. [9001-92-7] EC 3.4.24.4 Act: 0.5 U./mg lyop. mat'l	5 gm
16-0356-17	PRUNETIN (4',5-Dihydroxy-7-methoxyisoflavone) m.w. 284.26	10 mg
16-5999-07	b-PSEUDOURIDINE (A constituent of t-RNA/r-RNA) m.w. 244.21 m.p. 225-227°C CHR Pure	25 & 100 mg
16-8455-04	D-PSICOSE (D-Ribo-2-Ketohexose) [551-68-8] m.w. 180.16	25 & 100 mg
16-8421-16	PSYCHOSINE 98% [2238-90-6]	1 mg

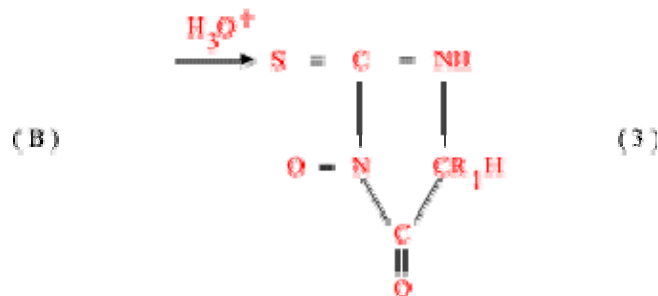
PTH (Phenylthiohydantoin) AMINO ACIDS

THE EDMAN METHOD FOR THE DETERMINATION OF AMINO ACID SEQUENCES OF PROTEINS

Approximately twenty years ago, Edman introduced the use of phenylisothiocyanate as a reagent for determining amino acid sequences in proteins. This reagent reacts only with the alpha and epsilon amino groups of proteins of all the functional groups present to produce the phenylthiocarbonyl derivative of the protein (A), reaction 1.

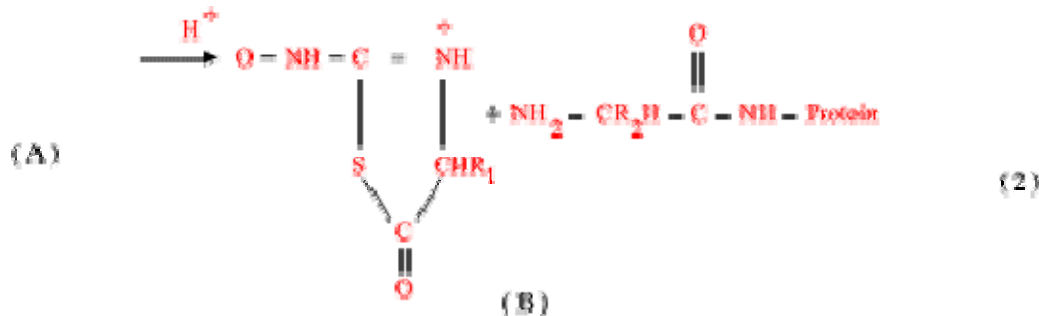


The phenylthiocarbonyl derivative of the N-terminus is cleaved in strongly acidic, non-aqueous solution at the first peptide bond producing the 2-anilino-5-thiazolinone derivative of the amino acid (B) formerly in the N-terminal position of the protein plus the protein lacking the N-terminal amino acid, reaction 2.



This protein can be separated and treated again with phenylisothiocyanate to identify 2nd, 3rd, 4th, etc., amino acid of the sequence.

The 2-anilino-5-thiazolinone derivative is changed by aqueous acid to the more stable 3-phenyl-2-thiohydantoin (PTH) reaction 3, which can be quantitated in a number of ways.



The 3-phenyl-2-thiohydantoin (PTH) absorbs strongly in the UV at approximately 16,000⁸ and have a minimum absorption at 245 nm. As an index of purity the ratio OD 269/OD 245, which should be about 2.3 - 2.7, can be used for the majority of these derivatives³. Vigorous hydrolysis will convert the derivatives back to the amino acid. With the exception of the derivatives of histidine, arginine and cysteic acid all the PTH derivatives are very soluble in organic solvents and insoluble in water.

The PTH derivative may be quantitated by using the high extinction value in the UV⁸. They may be identified by chromatographic methods, e.g., thin layer⁴, paper chromatography^{4,5}, partition chromatography⁶, gas chromatography⁷, silica gel thin layer⁸, polyamide⁹ and glass paper¹.

The PTH derivatives can be detected on chromatography by the use of iodine-azide reaction² or by fluorescent methods¹² or other chemical methods¹³.

The manual techniques have been combined and automated into a protein sequenator¹⁴ which has been used to determine the sequence of several proteins, e.g., 60 amino acid residues in myoglobin¹⁴.

In addition to using the Edman method for sequence purposes from the N-terminus of proteins, other uses of PTH derivatives have been reported.

1. The activation of trypsinogen by enterokinase has been followed¹⁵.
2. The conversion of fibrinogen to fibrin¹⁶,
3. Determination of the proteolytic activity of thrombin¹⁷
4. Used in the determination of the C-terminal amino acid after application of Akbori's hydrazinolysis method¹⁸.

A very useful reference to the methodology and application of the PTH derivatives in sequencing a protein can be found in "Protein Sequence Determination" edited by S.B.Needleman, Springer-Verlag, 1970, p.211.

References:

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- (4). Acta.Chem.Scand.,10,1507 (1956)
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- (9). J.Chrom.,26,323 (1967)
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- (11). Acta.Chem.Scan.,7,447 (1954)
- (12). Biochem.Biophys.Acta.,41,20 (1960) J.Chrom.,20,399 (1965)

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(14). Eur.J.Biochem.,1,80 (1967)

(15). Acta.Chem.Scand.,70,739 (1956)

(16). Acta.Chem.Scand.,11,194 (1960)

(17). Thromb.Diath.Haem.,4,167

(18). Acta.Chem.Scand.,14,1749 (1960)

The following PTH derivatives are exceptionally pure having been fully analyzed by mass spectrometry and conforms perfectly to theory.

Product No.	PRODUCT NAME	C	H	N	S	Cl	MP
16-5871-03	PTH-ALANINE	58.2	4.76	13.64	15.5		183-184
16-5872-03	PTH-DL-alpha-AMINO BUTYRIC ACID						
16-5873-03	PTH-DL-alpha-AMINOCAPRYLIC ACID						
16-5874-03	PTH-DL-alpha-AMINOISOBUTYRIC ACID						
16-5875-03	PTH-ARGININE .HCL.H₂O	44.9	5.66	19.84	9.52	10.5	178-180
16-5876-03	PTH-ASPARAGINE	52.8	4.48	16.86	12.9		228-230
16-5877-03	PTH-ASPARTIC ACID	52.8	4.07	11.24	12.8		229
16-5975-03	PTH-S-CARBOXYMETHYLCYSTEINE	48.4	4.24	9.28	21.6		159-161
16-5879-03	PTH-CYSTEIC ACID	36.7	3.26	8.6	19.8		235-238
16-5881-03	PTH-GLUTAMIC ACID	54.3	4.59	10.52	12.2		212-215
16-5882-03	PTH-GLUTAMINE	55.2	4.98	15.91	12.2		212-243
16-5883-03	PTH-GLYCINE	56.2	4.28	14.47	16.9		241-244
16-5884-03	PTH-HISTIDINE .2HCL.H₂O	43	4.24	15.44	8.79	19.7	241-244
16-5886-03	PTH-HYDROXYPROLINE	57.8	4.89	11.26	13.1		161-163
16-5887-03	PTH-ISOLEUCINE	63.1	6.54	11.37			173-175
16-5888-03	PTH-LEUCINE	62.9	6.53	11.28b		13.1	177-178
16-5897-03	PTH-epsilon-ptH-CARBAMYL LYSINE	60	5.4	13.99			164-166
16-5889-03	PTH-METHIONINE	53.9	5.29	10.49	24		115-117

Product No.	PRODUCT NAME	C	H	N	S	Cl	MP
16-8257-03	PTH-METHIONINE SULFONE						
16-5893-03	PTH-NORLEUCINE	62.7	6.5	11.27	13.3		137-138
16-4836-03	PTH-NORVALINE						
16-5896-03	PTH-PHENYLALANINE	68.1	5.04	9.92	11.7		182-184
16-5898-03	PTH-PROLINE	61.9	5.37	11.98	13.8		127-128
16-5899-03	PTH-SERINE	54.3	4.54	12.5	14.1		163-166
16-5901-03	PTH-THREONINE	55.9	5.03	11.83	13.4		194-195
16-5902-03	PTH-TRYPTOPHAN (AMORP.)	66.9	4.93	13.07			77-113
16-5903-03	PTH-TYROSINE	64.4	4.64	9.5	10.7		208-211
16-5904-03	PTH-VALINE	61.4	5.83	11.99	14		206-208

NOTE: all items available in 100 mgs, 500 mgs, and 1 gm quantities

16-7100-17	PULEGON 99% [89-82-7] m.w. 152.23						1 gm
16-7679-06	PULLULAN m.w. 100,000						5 gm
16-7678-06	PULLULAN [9057-02-7] m.w. 50,000						500 mg & 1 gm
16-6001-07	PURINE RIBONUCLEOSIDE						100 & 250 mg

PVP see separate section

16-7943-25	PYRIDOXAL Hydrochloride [65-22-5] m.w. 203.63						500 mg & 1 gm
16-7944-25	PYRIDOXAL-5'-PHOSPHATE (Codecarboxylase) [54-47-7] m.w. 265.16						1 & 5 gm

16-7945-25	PYRIDOXAMINE Dihydrochloride m.w. 259.13	1 & 10 gm
16-7946-25	PYRIDOXINE Hydrochloride (Vitamin B6) [58-56-0] m.w. 205.69	5 & 25 gm
16-5985-06	1-(2-PYRIDYLAZO)-2-NAPHTHOL m.w. 249.27 [85-95-8]	1 & 10 gm
16-5980-06	2-(2-PYRIDYLAZO) CHROMOTROPIC ACID disodium salt [2113-70-4]	1 & 10 gm
16-5820-03	L-PYROGLUTAMIC ACID [98-79-3] m.w. 129.11 m.p. 162-163°C	5 & 25 gm
16-5142-02	PYROGLU-ALA-ASP-PRO-ASN-LYS-PHE-TYR-GLY-LEU-MET NH₂ (Physalaemin) m.w. 1264.43	1 & 2 mg
16-8075-03	PYROGLU-7-AMIDO-4-METHYLCOUMARIN (Pyroglutamyl peptidase I substrate)	10 mg
16-7870-02	PYROGLU-ARG-THR-LYS-ARG-7-AMIDO-4-METHYLCOUMARIN (Furin substrate)	1 mg
16-5143-02	PYROGLU-ASN-GLY m.w. 300.27	10 & 25 mg
16-5144-02	PYROGLU-U-N-im-BENZYL-HIS-PRO-b-NAPHTHYLAMIDE m.w. 595.68	10 & 25 mg
08-6055-02	PYROGLU-3,4-DEHYDROPRO-3,4-DEHYDROPRO-GLY-GLY-SER-LYS- VAL-ILE-LEU-PHE (3,4-Dehydropro ^{2,3}) Head activator	1 mg
16-5146-02	PYROGLU-GLN-ARG-LEU-GLY-ASN-GLN-TRP-ALA-VAL-GLY-HIS- LEU-MET NH₂ (Bombesin) m.w. 1650.81	1 mg
02-6228-02	PYROGLU-GLN-ARG-TYR-GLY-ASN-GLN-TRP-ALA-VAL-GLY-HIS- LEU-MET NH₂ ((Tyr ⁴) Bombesin) m.w. 1670.13	1 mg

02-6227-02	PYROGLU-GLN-LYS-LEU-GLY-ASN-GLN-TRP-ALA-VAL-GLY-HIS-LEU-MET NH₂ (Lys ³) Bombesin) m.w. 1592.11	1 mg
03-7693-02	PYROGLU-GLN-ASP-TYR(SO₃H)-THR-GLY-TRP-MET-ASP-PHE-NH₂.2NH₃ (Caerulein) m.w. 1386.5 (95% by HPLC)	1 mg
16-6636-02	PYROGLU-GLY-LEU-PRO-PRO-ARG-PRO-LYS-ILE-PRO-PRO-AcOH (Bradykinin potentiator B) m.w. 1182.6	1 mg
16-6637-02	PYROGLU-GLY-LEU-PRO-PRO-GLY-PRO-PRO-ILE-PRO-PRO (Bradykinin potentiator C) m.w. 1052.2	1 mg
16-5145-02	PYROGLU-GLY-VAL-ASN-ASP-ASN-GLU-GLU-GLY-PHE-PHE-SER-ALA-ARG-TYR (Fibrinopeptide B, L-Tyr) m.w. 1715.74	1 mg
16-8270-02	PYROGLU-HIS-GLY (Anorexogenic peptide) m.w. 323.3	10 & 25 mg
16-8271-02	PYROGLU-HIS-GLY-CYCLOLEU (Anorexogenic peptide) m.w. 434.5	10 & 25 mg
16-4202-02	PYROGLU-HIS-PRO NH₂ (Thyrotropic releasing hormone) [24305-27-9] m.w. 361.36	2 & 5 mg
16-7888-02	PYROGLU-HIS-PRO-b-NAPHTHYLAMIDE (Prolyl endopeptidase substrate)	10 mg
12-6076-02	PYROGLU-HIS-TRP-SER-3,5-DIIODO-TYR-GLY-LEU-ARG-PRO-GLY-NH₂ ((3,5-Diiodo-Tyr ⁵) LHRH)	1 mg
12-6080-02	PYROGLU-HIS-TRP-SER-TYR-HYDRAZIDE (LHRH 1-5 Hydrazide)	50 mg
12-4664-02	PYROGLU-HIS-TRP-SER-TYR-D-ALA-LEU-ARG-PRO-GLY NH₂ ((D-Ala ⁸) LHRH) m.w. 1198.5	1 mg

12-6074-02	PYROGLU-HIS-TRP-SER-TYR-D-ALA-N-METHYL-LEU-ARG-PRO-GLY-NH₂ (D-Ala ⁶ , N-Methyl-Leu ⁷) LHRH)	1 mg
12-6070-02	PYROGLU-HIS-TRP-SER-TYR-GLY-LEU-ARG-PRO-GLY (LHRH, free acid)	1 mg
12-6069-02	PYROGLU-HIS-TRP-SER-TYR-GLY-LEU-ARG-PRO-GLY-NH₂ (LHRH) m.w. 1182.39	1 mg
12-6071-02	PYROGLU-HIS-TRP-SER-TYR-GLY-LEU-ARG-PRO-GLY-DINITROANILIDE (LHRH Dinitroanilide)	1 mg
12-4556-02	PYROGLU-HIS-TRP-SER-TYR-D-LEU-LEU-ARG-PRO NHCH₂CH₃ (Luteinizing Releasing Hormone Analog)	1 mg
12-4572-02	PYROGLU-HIS-TRP-SER-TYR-D-LYS-LEU-ARG-PRO-GLY NH₂ (D-Lys ⁶) LHRH) m.w. 1253.5	1 mg
12-6079-02	PYROGLU-HIS-TRP-SER-TYR-D-TRP-LEU-ARG-PRO-GLY NH₂ (D-Trp ⁶) LHRH)	1 mg
16-3734-02	PYROGLU-HIS-TRP-SER-TYR-D-TRP-LEU-ARG-PRO NHCH₂CH₃ (Luteinizing Hormone Releasing Analog)	1 & 5 mg
16-3735-02	PYROGLU-HIS-TRP-SER-TYR-GLY-LEU-ARG-PRO NHCH₂CH₃ (Luteinizing Hormone Releasing Analog)	1 & 5 mg
12-5538-02	PYROGLU-HIS-TRP-SER-TYR-GLY-LEU-ARG-PRO-GLY NH₂ (LHRH)	5 mg
16-5288-02	PYROGLU-LEU-ASN-PHE-SER-ALA-GLY-TRP NH₂ (Adiopotkinetic hormone II - L.migratoria)	1 & 2.5 mg
16-5289-02	PYROGLU-LEU-ASN-PHE-SER-THR-GLY-TRP NH₂ (Adiopotkinetic hormone II - S.gregaria)	1 & 2.5 mg
16-4589-02	PYROGLU-LEU-PRO-PRO-ARG-PRO-LYS-ILE-PRO-PRO (Angiotensin I con'vtg enzy. inhibitor) m.w. 1125.36	1 & 2 mg

16-6299-02	PYROGLU-LEU-TYR-GLU-ASN-LYS-PRO-ARG-ARG-PRO-TRP-ILE-LEU OH (Neurotensin, Bovine) m.w. 1673	1 & 2 mg
02-6242-02	PYROGLU-LYS-TRP-ALA-PRO (Bradykinin Potentiator Factor BPP 5a)	5 mg
11-6077-02	PYROGLU-1-METHYL-HIS-TRP-SER-TYR-GLY-LEU-ARG-PRO-GLY NH₂TFA ((1-Methyl-His ² LHRH)	1 mg
16-8076-03	PYROGLU-b-NAPHTHYLAMIDE (Pyroglutamyl peptidase I substrate)	25 mg
19-7670-02	PYROGLU-PHE-PHE-PRO-LEU-MET NH₂ ((Pyroglu ⁶ , Pro ⁸) (Substance P 6-11) (Septide)	1 mg
11-6078-02	PYROGLU-D-PHE-PRO-LSER-TYR-D-PHE-LEU-ARG-PRO-GLY NH₂ ((D-Phe ^{2,6} , Pro ³) LHRH)	1 mg
08-6053-02	PYROGLU-PRO-PRO-GLY-GLY-SER-LYS-ASN-ILE-LEU-PHE ((Asn ⁸) Head Activator)	1 mg
08-6054-02	PYROGLU-PRO-PRO-GLY-GLY-SER-LYS-VAL-ASP-LEU-PHE ((Asp ⁸) Head Activator)	1 mg
08-6052-02	PYROGLU-PRO-PRO-GLY-GLY-SER-LYS-VAL-ILE-LEU-PHE (Head Activator)	1 mg
08-6056-02	PYROGLU-PRO-PRO-GLY-GLY-SER-LYS-VAL-ILE-THR-PHE ((Thr ¹⁰) Head Activator)	1 mg
02-5147-02	PYROGLU-TRP-PRO-ARG-PRO-GLN-ILE-PRO-PRO (Bradykinin Potentiator factor BPP9a) m.w. 1101.41	5 mg
16-7410-06	2-PYRROL CARBOXAMIDE [4551-72-8]	500 mg & 1 gm
16-4036-06	PYRUVIC ACID SODIUM SALT m.w. 101.05	10 & 25 gm

Q

17-6388-17	QUASSINE , powder m.w. 388.44	50 & 100 mg
17-2664-17	QUININE SULFATE [6119-70-6] m.w. 714.87 m.p. 233-235°C	2 & 25 gm
17-7478-06	8-QUINOLINOL SULFATE [134-31-6]	500 mg & 1 gm
17-6101-06	QUINACRINE MUSTARD .2HCl [4213-45-0]	50 & 250 mg

R

18-6355-04	RAFFINOSE Pentahydrate [512-69-6] m.w. 594.52	10 & 50 gm
18-6356-04	RAFFINOSE, UNDECYLACETATE m.w. 968.84	5 & 10 gm
18-1833-02	RANAMARGARIN Asp-Asp-Ala-Ser-Asp-Arg-Ala-Lys-Lys-Phe-Tyr-Gly-Leu-Met-NH ₂	1 mg
18-1834-02	RANATENSIN Pyroglu-Val-Pro-Gln-Trp-Ala-Val-Gly-His-Phe-Met-NH ₂	1 mg

RENIN SUBSTRATE see: **CBZ-PRO-PHE-HIS**

18-8152-18	RENNIN , Calf stomach [9001-98-3] Act: prox. 50 U./mg protein	25 & 100 mg
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RENNIN SUBSTRATE see: **ASP-ARG-VAL-TYR-ILE....**

18-9081-17	RESCINNAMINE [24815-24-5] m.w. 634.71 m.p. 238-239°C	500 mg & 1 gm
18-9082-17	RESERPINE [50-55-5] m.w. 608.70 m.p. 280-283°C	1 gm

RETINOIC ACID see: **VITAMIN A**

18-6357-04	a-L-RHAMNOSE monohydrate m.w. 182.17	5 & 25 gm
18-6358-04	D-RHAMNOSE monohydrate m.w. 182.17 m.p. 75-93°C	10 mg

18-8024-06 **6-D-RIBITYLAMINO-3,4-DIMETHYL-1-AMINOBENZENE HCl** 25 & 100 mg

RIBOFLAVIN see: **VITAMIN B2**

18-6368-07 **RIBOFLAVIN-5'-PHOSPHATE** Sodium 5 & 25 gm

[130-40-5] m.w. 514.4

18-6362-18 **RIBONUCLEASE** 100 mg & 1 gm

(Bovine pancreas) [9001-99-4] 5X cryst. Act: 40 K units U/mg.

18-6246-18 **RIBONUCLEASE T1** 100 & 500 KU

(A. oryzae) [9026-12-4] EC 3.1.27.3 Susp. 3.2M/l amm. sulfate Spec. act: 350,000 U/mg

18-6369-07 **t-RIBONUCLEIC ACID** 50 & 100 mg

(Brewers yeast) Ala: 50 uumoles/A260 Phe: 50 uumoles/A260 Val: 60 uumoles/A260

18-6361-07 **t-RIBONUCLEIC ACID** (E.coli) strain B 50 & 100 mg

Nuclease act: Neg. DNA content

18-8458-04 **L-RIBOSE** 50 & 100 mg

m.w. 150.1

18-6360-04 **D-RIBOSE** 10 & 50 gm

[50-59-1] m.w. 150.13

RUBIDIUM SALTS see product listing

18-8025-06 **RUFIANIC ACID SODIUM SALT 98%** 500 mg & 1 gm

S

19-7101-17	SABINENE	100 & 250 mg
19-8026-06	SACCHARIN, INSOLUBLE PWDR	10 & 50 gm
19-8027-17	SAKURANETIN	25 & 100 mg
	m.w. 286.27	

SANDWICH TRP and TYR Kit see PEPTIDE Kits

19-9083-17	SANGUINARINE Base	100 mg
	m.w. 332.34 m.p. 278-280°C	
19-6759-03	SARCOSINE HCL	5 & 25 gm
	[637-96-7]	
19-3691-02	SAR-L-ILE	100 & 250 mg
	m.w. 202.26	
19-3693-02	SAR-L-PHE	100 & 250 mg
	m.w. 236.26	
19-7175-02	SAR-DL-PHE	50 & 100 mg
	m.w. 236.26	
19-6918-02	SAR-ARG-VAL-TYR-ILE-HIS-PRO-ALA	5 mg
	((Sar ¹ , Ala ⁸) Angiotensin II) m.w. 926.08	
19-6917-02	SAR-ARG-VAL-TYR-ILE-HIS-PRO-GLY	5 mg
	((Sar ¹ , Gly ⁸) Angiotensin II) m.w. 912.05	
19-6915-02	SAR-ARG-VAL-TYR-ILE-HIS-PRO-LEU	5 mg
	((Sar ¹ , Leu ⁸) Angiotensin II) m.w. 968.17	
19-6212-02	SAR-ARG-VAL-TYR-ILE-HIS-PRO-PHE	5 mg
	((Sar ¹ , Phe ⁸) Angiotensin II)	
19-6222-02	SAR-ARG-VAL-TYR-ILE-HIS-PRO-THR	5 mg

The Peptide Hormone

SECRETINPentaacetate, H₂O, synthetic

(H-HIS-SER-ASP-GLY-THR-PHE-THR-SER-GLU-LEU-SER-ARG-LEU-ARG-ASP-SER-ALA-ARG-LEU-GLN-ARG-LEU-LEU-GLN-GLY-LEU-VALAMIDE)

Very early this century, in 1902, a biologically active factor which can stimulate the pancreas to release sodium bicarbonate was isolated in crude form from hog intestines by Bayliss and Starling¹. These discoverers realizing the messenger role of a chemical substance as a new concept, coined a new word and called the stimulating factor secretin, a hormone (derived from the greek word "I move").

It turned out however, to be rather difficult to achieve its isolation from gut mucosa in pure form. The pure hormone was finally obtained more than half a century later by Jorpes and Mutt² of the Karolinska Institute in Stockholm in 1961. The same group was also successful in determining the sequence of the twenty-seven amino acids constituting the peptide chain of secretin^{3,4}.

The correctness of the proposed primary structure of porcine secretin, namely H-His-Ser-Asp-Gly-Thr-Phe-Thr-Ser-Glu-Leu-Ser-Arg-Leu-Arg-Asp-Ser-Ala-Arg-Leu-Gln-Arg-Leu-Leu-Gln-Gly-Leu-Val-NH₂, could subsequently be proved by two synthesis carried out by Bodansky and his associates^{5,6,8}.

A new synthesis via a different route was described by Wunsch and his co-workers^{9,10,11}. Later, on two other synthetic attempts for the artificial preparation of secretin were published by Bayerman^{12,13} and by Geiger¹⁴ and their respective collaborators.

The physiological activity of secretin has been thoroughly investigated^{15,16}. It was found that in addition to stimulating pancreatic bicarbonate and biliary secretion, secretin also possesses a stimulatory action on pancreatic enzyme secretion¹⁶, causes in the stomach¹⁹. The cellular localization of secretin by immunofluorescence techniques in canine duodenum is described by Pearse and his associates²⁰.

Investigations in the treatment of duodenal ulcer^{21,22} were started in the mid-60's.

Research Plus offers pure, synthetic Secretin for non-human investigations. This heptacosapeptide does not contain cysteine hcl, a stabilizer. As such, it can also be used in RIA research. However, without the stabilizer, secretin must be refrigerated at -20°C in order that its biological activity is maintained.

Bibliography:

Research Plus has developed an extensive bibliography consisting of 466 references, by author, publication and title on the product Secretin as well as related intestinal hormones. It is free for the asking.

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19-2708-02 **SECRETIN, PENTAACETATE**, Porcine, Synthetic

19-2772-02 **SECRETIN, HEXAACETATE**, Porcine, Synthetic

(His-Ser-Asp-Gly-Thr-Phe-Thr-Ser-Glu-Leu-Ser-Arg-Leu-Arg- Asp-Ser-Ala-Arg-Leu-Gln-Arg-Leu-Leu-Gln-Gly-Leu-Val-NH₂. acetate)

m.w. 3055.46 (free peptide)

19-2773-02 **SECRETIN, HEXAASPARATATE**, Porcine, Synthetic

(His-Ser-Asp-Gly-Thr-Phe-Thr-Ser-Glu-Leu-Ser-Arg-Leu-Arg- Asp-Ser-Ala-Arg-Leu-Gln-Arg-Leu-Leu-Gln-Gly-Leu-Val-NH₂. hexxaaspartate)

m.w. 3055.46 (free peptide)

19-2780-02 **SECRETIN, Human**, Synthetic

(His-Ser-Asp-Gly-Thr-Phe-Thr-Ser-Glu-Leu-Ser-Arg-Leu-Arg-Glu-Gly-Ala-Arg- Leu-Leu-Gln-Gly-Leu-Val-NH₂.acetate)

m.w. 3039.5 (C₁₃₀H₂₂₀N₄₄O₄₀)

HPLC purity range from 99 thru 100%

Biological Activity: At least 3000 clinical units per mg material

At least 3500 clinical units per mg peptide

NOTE:

Products 2708, 2772, and 2773 available in 1, 2.5 mg quantities

Product 2780 available in 500 ug, 1 and 2.5 mg quantities

19-6022-07	6-SELENOGUANOSINE [29411-74-3] m.w. 346.2 m.p. 206-208°C dec.	10 & 25 mg
19-6023-07	6-SELENOINOSINE m.w. 331.19 m.p. 288-290°C dec.	10 & 25 mg
19-6754-03	L-SERINE [56-45-1] m.w. 105.09	10 & 50 mg
19-8789-03	D-SERINE [312-84-5] m.w. 105.09	500 mg & 1 gm
19-6755-03	DL-SERINE [302-84-1] m.w. 105.09	10 & 50 mg
19-6762-02	L-SER-GLY m.w. 162.14	100 & 250 mg
19-6763-02	L-SER-GLY-ALA-GLY-ALA-GLY.H₂O (Silk sequence) m.w. 418.4 C: 41.26 H: 6.26 N: 18.93 O: 32.64	25 & 50 mg
19-3694-02	L-SER-GLY-GLY m.w. 219.20	100 & 250 mg
19-8895-02	L-SER-GLY-MET-GLY-PHE-GLY-PRO-GLU-THR-PRO NH₂ (Thyrocalcitonin 23-32) m.w. 1014.13	25 & 50 mg
19-3695-02	L-SER-LEU m.w. 218.25	100 & 250 mg
19-3696-02	L-SER-SER m.w. 192.17	100 & 250 mg
19-3697-02	L-SER-SER-SER m.w. 297.25	50 & 100 mg
19-3698-02	L-SER-TYR m.w. 268.27	100 & 250 mg
19-5148-02	L-SER-TYR-LYS m.w. 396.43	50 & 100 mg

19-2171-02	L-SER-TYR-SER-MET (ACTH 1-4) m.w. 486.52	5 mg
19-5149-02	L-SER-TYR-SER-MET-GLU-HIS-PHE-ARG-TRP-GLY-LYS-PRO-VAL-GLY-LYS-LYS-ARG-ARG-PRO-VAL-LYS-VAL-TYR-PRO (ACTH 1-24) m.w. 2933.39	1 mg
19-6760-03	SEROTONIN CREATININE SULFATE [61-47-2] m.w. 369.40	1 & 5 gm
19-9086-17	SERPENTINE TARTRATE	10 mg

SERPENTINA ROOT see: **RAUWOLFIA SERPENTINA BENTH.**

19-3362-06	SILVER MYRISTATE	10 & 25 gm
19-7949-10	SODIUM CITRATE , Dihydrate, Cryst. m.w. 294.10 Min. 99%	50 & 250 gm
19-4290-16	SODIUM LAURATE 99% [629-25-4]	100 mg
19-4291-16	SODIUM MYRISTATE 99% [822-12-8]	100 mg
19-4294-16	SODIUM OLEATE 99% [143-19-1]	100 mg
19-4292-16	SODIUM PALMITATE 99% [408-35-5]	100 mg
19-4293-16	SODIUM STEARATE 99% [822-16-2]	100 mg
19-8147-10	SODIUM PHOSPHATE , Dibasic, Heptahydrate, Abs. grade [7782-85-6] m.w. 268.07	500 gm & 1 kg
19-8148-10	SODIUM PHOSPHATE , Monobasic, Absolute grade [7558-80-7] m.w. 137.99	500 gm & 1 kg

19-7481-04	SODIUM THIOGLUCOSE m.p. 173-174°C	500 gm & 1 kg
19-9087-17	SOLANIDINE HCL [80-78-4] m.w. 434.09 m.p. 340°C	25 mg
19-3863-17	a-SOLANINE, CHR [20562-02-1] m.w. 868.04	5 mg
19-3870-17	SOLASODINE m.w. 413.62 m.p. 195-202°C (95%) [126-17-0]	1 & 10 gm

SOMATOSTATIN and ANALOGS

01-6286-02	SOMATOSTATIN 14 (Ala-Gly-Cys-Lys-Asn-Phe-Phe-Trp-Lys-Thr-Phe-Thr-Ser-Cys)	1 & 5 mg
19-7673-02	SOMATOSTATIN 28 (1-14) (Ser-Ala-Asn-Ser-Asn-Pro-Ala-Met-Ala-Pro-Arg-Glu-Arg-Lys)	1 mg
03-6643-02	SOMATOSTATIN, Cyclo Cyclo(7-Aminoheptanoyl-Phe-d-Trp-Lys-O-Benzyl-Thr) acetate	1 mg
20-6301-02	TYR¹ SOMATOSTATIN (H-Tyr-Gly-Cys-Lys-Asn-Phe-Phe-Trp-Lys-Thr-Phe-Thr-Ser-Cys)	1 mg
01-5436-02	TYR¹¹ SOMATOSTATIN (Ala-Gly-Cys-Lys-Asn-Phe-Phe-Tyr-Lys-Thr-Tyr-Thr-Ser-Cys)	1 mg
19-8459-04	a-SOPHOROSE, monohydrate m.w. 342.3	50 & 100 mg
19-8393-18	SORBITOL DEHYDROGENASE (Sheep liver) lyoph. [9028-21-1] EC 1.1.1.14 Act: 25 U/mg	2 & 10 mg

19-6777-04	SORBITOL hydrate U.S.P. [50-70-4] m.w. 200.19	1 & 10 kg
19-6778-04	L-SORBOSE [87-79-6] m.w. 180.16	100 gm & 1 kg
19-8460-04	L-SORBOSE-1-PHOSPHATE Dipotassium salt m.w. 336.34	100 & 250 mg
19-3742-06	SPERMIDINE 99% [124-20-9] m.w. 145.25	1 & 5 gm
19-3743-06	SPERMIDINE PHOSPHATE [49721-50-8]	1 & 5 gm
19-3745-06	SPERMINE , Practical 97% [71-44-3] m.p. 28-30°C	100 & 250 mg
19-6316-06	SQUALANE m.w. 422.83 b.p. 210-215°C	250 ml
19-6298-06	SQUALENE 98% m.w. 410.73 b.p. 285°/25mm	100 ml
19-6779-04	STACHYOSE tetrahydrate m.w. 738.65	100 & 500 mg

STEROIDS see separate section

19-6803-06	STILBENEFLUOBLUE S m.w. 646.50	1 & 10 gm
19-6167-21	STREPTOZOTOCIN Cryst. [1883-66-4] m.w. 265.2	100 mg
19-5446-02	a-SUBSTANCE 1B (Arg-Gly-Pro-Phe-Pro-Ile)	1 mg
01-4200-02	SUBSTANCE P BOVINE (H ₂ N-Arg-Pro-Lys-Pro-Gln-Gln-Phe-Phe-Gly-Leu-Met) m.w. 1347.0	1 mg

19-7664-02	SUBSTANCE P AMIDE (Arg-Pro-Lys-Pro-Gln-Gln-Phe-Phe-Gly-Leu-Met-NH ₂)	1 mg
01-6268-02	TYR⁶ SUBSTANCE P (Arg-Pro-Lys-Pro-Gln-Gln-Phe-Tyr-Gly-Leu-Met-NH ₂) [55614-10-3]	1 mg
19-7666-02	SUBSTANCE (1-4) (Arg-Pro-Lys-Pro)	1 mg
19-7667-02	SUBSTANCE P (1-9) (Arg-Pro-Lys-Pro-Gln-Gln-Phe-Phe-Gly)	1 mg
19-7668-02	SUBSTANCE P (2-11) (Pro-Lys-Pro-Gln-Gln-Phe-Phe-Gly-Leu-Met-NH ₂)	1 mg
16-7889-02	SUBSTANCE P 4-11 (D-Trp ⁴ , D-Trp ^{7,8}) (D-Pro-Gln-Gln-d-Trp-Phe-d-Tyr-Leu-Met-NH ₂)	1 mg
19-7670-02	SUBSTANCE P 6-11) (Septide) ((Pyroglu ⁶ , Pro ⁸) (Pyroglu-Phe-Phe-Pro-Leu-Met NH ₂)	1 mg
19-7671-02	SUBSTANCE P (7-11) (Phe-Phe-Gly-Leu-Met-NH ₂)	1 mg
19-7890-02	SUCCINYL-ALA-ALA-ALA-p-NITROANILIDE (Proteinase K substrate)	10 & 25 mg
19-8082-02	SUCCINYL-ALA-ALA-PHE-7-AMIDO-4-METHYLCOUMARIN (Thermolysin substrate)	10 mg
19-7891-02	SUCCINYL-ALA-ALA-PHE-p-NITROANILIDE (Proteinase K substrate)	10 mg
19-7762-02	SUCCINYL-ALA-ALA-PRO-MET-p-NITROANILIDE (Cathepsin G substrate)	10 mg
19-6284-02	SUCCINYL-ARG-PRO-PHE-HIS-LEU-LEU-TYR-4-METHYLCOUMARYL-7-AMIDE CHR pure (Renin substrate) CHR pure m.w. 1222.4	10 & 25 mg
19-7742-02	SUCCINYL-LEU-LEU-VAL-TYR-7-AMIDO-4-METHYLCOUMARIN (Calpain substrate)	5 & 10 mg

19-5290-02	N-SUCCINYL-L-PHE-LEU-PHE-p-NITROANILIDE (Cathepsin G substrate)	10 & 25 mg
19-7879-02	SUCCINYL-PHE-PRO-PHE-p-NITROANILIDE (Mast cell protease substrate)	10 mg
19-7764-02	SUCCINYL-VAL-PRO-PHE-p-NITROANILIDE (Cathepsin G substrate)	10 mg
19-6804-06	SULFOCHLOROPHENOL S [2103-73-3] m.w. 877.5	500 mg & 1 gm
19-6805-06	SULFONAZO III [1738-02-9] m.w. 776.57	500 mg & 1 gm

Sulforhodamine 101 Acid Chloride see: **Texas Red**

19-6251-18	SUPEROXIDE DISMUTASE (Beef kidney) lyoph. EC 1.15.1.1 [9054-89-1] Act: 10,000 U./mg protein - Protein: 95%	10 & 25 mg
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20-8246-04	TAGATOSE-6-PHOSPHATE Barium salt	25 & 100 mg
20-7649-04	L(-)-TALOSE m.w. 180.16 m.p. 120-123°C rot: -19° c=2 H ₂	25 & 100 mg
20-8862-03	meso TARTARIC ACID monohydrate 99% [147-73-9] m.w. 168.10 m.p. 140°C C: 30.74 H: 4.15	5 & 25 gm
20-6386-06	p-TERPHENYL	10 & 25 gm
20-7103-17	a-TERPINEN [99-86-5] m.w. 136.23	500 mg
20-7104-17	g-TERPINEN [99-85-4] m.w. 136.23	500 mg
20-7105-17	a-TERPINEOL [800-41-7] m.w. 136.23	500 mg
20-7255-04	TETRA-O-ACETYL-b-D-RIBOPYRANOSE m.w. 318.28 m.p. 113-114°C	1 & 10 gm
19-6768-16	TETRADECYL SODIUM SULFATE [1191-50-0] m.w. 316.54	5 & 10 gm
19-7334-16	TETRADECYL SODIUM SULFONATE m.w. 300.43	5 & 10 gm
20-7486-06	TETRAHYDROXY-1,4-QUINONE [319-89-1]	1 & 10 gm
20-7327-06	TETRANITROTETRAZOLIUM BLUE [1184-43-6] m.w. 838.67	250 & 500 mg
20-1069-06	TETRANITROMETHANE (TNM) m.w. 196.04 m.p. 13.2-13.8°C (Oxidizer)	as requested
20-4837-06	1,1,4,4-TETRAPHENYL-1,3-BUTADIENE m.p. 203-205°C	250 & 500 mg
20-7438-06	1,2,3,4-TETRAPHENYL BUTADIENE	1 & 5 gm

20-8656-06	TETRAPHENYL CYCLOPENTADIENOL	500 mg & 1 gm
20-8654-06	TETRAPHENYL CYCLOPENTADIENONE [479-33-4]	1 & 10 gm
20-7423-06	TETRAPHENYL ETHYLENE 98% [632-35-9] m.p. 222-224°C	5 & 25 gm
20-7422-06	TETRAPHENYLETHYLENE OXIDE [470-35-9]	1 & 5 gm
20-8254-06	1,1,3,3-TETRAPHENYLPROPANOL-1	1 & 10 gm
20-7291-06	TETRAZOLIUM BLUE [1871-22-3] m.w. 727.67	1 & 10 gm

THIAMINE HYDROCHLORIDE see: **VITAMIN B1**

THIAZOLYL BLUE see: **MTT**

20-3760-03	DL-2-b-THIENYL-a-ALANINE m.w. 171.21	100 & 500 mg
20-7471-06	THIOCARBONYL bis(THIOGLYCEROL) DIETHYLAMIDE	1 & 10 gm
20-8029-06	3,3'-THIODIPROPIONIC ACID m.w. 178.20	10 & 25 gm
20-5749-04	THIO-b-D-GALACTOPYRANOSE sodium salt [42891-22-5] m.w. 387.4 m.p. 160-161°C	250 mg & 1 gm
20-7252-06	a-THIOGLYCEROL [96-27-5] m.w. 108.16	25 & 100 gm
20-2185-07	6-THIOINOSINE [574-25-4]	25 & 100 mg
20-7429-06	3-THIOMORPHOLIMONE	500 mg & 1 gm

DL-6,8-THIOOCTIC ACID see: **a-LIPOIC ACID**

20-7214-03	D-THREONINE [632-20-2] m.w. 119.12	1 & 10 gm
20-4598-03	D(-) allo THREONINE [24830-94-2] m.w. 119.12	10 & 25 mg
20-7217-03	DL-THREONINE (allo free) [80-68-2] m.w. 119.12	25 & 250 gm
20-8559-03	DL-allo THREONINE m.w. 119.12	250 & 500 mg
20-3699-02	L-THR-ALA m.w. 190.21	50 & 100 mg
20-5291-02	THR-ARG-LYS-ARG (Anti-Kentsin)	1 & 2.5 mg
20-3700-02	L-THR-GLY [686-44-2] m.w. 176.17	50 & 100 mg
20-3701-02	L-THR-GLY-GLY m.w. 251.24	50 & 100 mg
20-3702-02	L-THR-LEU m.w. 232.29	50 & 100 mg
20-3703-02	L-THR-LYS-TYR m.w. 410.45	50 & 100 mg
20-7235-02	L-THR-MET m.w. 250.33	50 & 100 mg
20-5151-02	L-THR-TYR-LYS m.w. 410.45	25 & 50 mg
20-5152-02	L-THR-TYR-SER-LYS m.w. 497.53	25 & 50 mg
20-8841-02	L-THR-VAL-LEU (Schizophrenia related peptide) m.w. 331.40	100 & 250 mg

20-8030-17	b-THUJONE m.p. 200-202°C	500 mg
20-7350-07	THYMINE (5-Methyluracil) [65-71-4] m.w. 126.12	5 & 25 gm
20-7109-17	THYMOL [89-83-8] m.w. 150.22 m.p. prox. 50°C	100 gm
06-6050-02	THYMOPOIETIN PEPTIDE FRAGMENT (Gly-Glu-Gln-Arg-Lys-Asp-Val-Tyr-Val-Gln-Leu-Tyr-Leu) m.w. 1612.0	1 mg
 THYROCALCITONIN PEPTIDES see: GLU; PHE AND SER PEPTIDES		
20-8265-09	THYROGLOBULIN (High Iodine content, soluble) [9010-34-8]	100 & 500 mg
 THYROTROPIC RELEASING HORMONE see: PYROGLU-HIS-PRO NH₂		
5100-19	THYROTROPIC STIMULATING HORMONE (TSH) BOVINE m.w. 26,000 - 30,000 10 u/vial	1 vial
20-7224-03	L-THYROXINE SODIUM PENTAHYDRATE (Active Thyroid hormone) m.w. 88.95 m.p. 207-210°C	100 mg & 1 gm
20-7953-25	D-g-TOCOPHEROL 95% min. m.w. 416.69	100 mg
20-7959-25	D-a-TOCOPHEROL QUINONE (Vitamin E antagonist) [62726-91-4] m.w. 446.72	100 & 500 mg
20-7958-25	D-a-TOCOPHEROL SUCCINATE m.w. 530.79	500 mg & 1 gm
20-7324-03	N-TOSYLAMIDE PHENETHYL CHLOROMETHYLKETONE (TPCK) m.w. 351.86 m.p. 106-108°C	as requested

20-7228-03	p-TOSYL-L-ARG [1159-15-5] m.w. 328.39	1 & 10 gm
20-7230-03	p-TOSYL-L-ARG METHYLESTER Hcl (TAME) [1784-03-8] m.w. 378.88 m.p. 145-147°C	1 & 5 gm
20-7231-03	p-TOSYL-DL-ARG METHYLESTER Hcl m.w. 378.88	500 mg & 1 gm
20-5911-06	6-TOSYL-β-CYCLODEXTRIN	500 mg & 1 gm
20-8866-03	N-TOSYL-L-GLU [4216-80-2]	1 & 10 gm
20-2332-02	TOSYL-GLY-PRO-ARG-p-NITROANILIDE acetate (For determining serum proteases i.e., thrombin) m.w. 662.62	10 & 25 mg
20-2333-02	TOSYL-GLY-PRO-LYS-p-NITROANILIDE acetate m.w. 634.7	10 & 25 mg
20-8930-03	e-TOSYL-L-LYS m.w. 300.4	1 & 10 gm
20-7325-03	N-α-TOSYL-L-LYS CHLOROMETHYLKETONE (TLCK) (Papain & Tryp Inhibitor) m.w. 369.32 m.p. 150-153°C	100 & 500 mg
20-8931-03	e-TOSYL-L-LYS METHYLESTER Hcl	1 & 10 gm
20-8932-03	e-TOSYL-DL-LYS m.w. 300.4	1 & 10 gm
20-8430-06	TRASYLOL™ (Kallikrein inactivator) m.w. 6512 100,000 KIU/amp (10 ml)	1 & 5 amp

trans-CINNAMINOYL IMIDAZOLE see: **CINNAMINOYL**

20-7257-04	α,α-TREHALOSE , dihydrate [99-20-7] m.w. 378.33	5 & 25 gm
19-6769-16	TRIDECYL SODIUM SULFATE m.w. 302.52	5 & 10 gm
19-7335-16	TRIDECYL SODIUM SULFONATE m.w. 286.41	5 & 10 gm
20-3749-03	TRIFLUOROACETYL GLYCINE [383-70-0] m.w. 171.08 m.p. 117-119°C CHR pure	100 & 250 mg
20-3751-03	TRIFLUOROACETYL GLYCINE-<i>p</i>-NITROPHENYLESTER	100 mg
20-8799-03	3,3',5-TRIIODO-L-THYRONINE [6893-02-3] m.w. 651.01 m.p. 236-237°C	100 & 500 mg
20-7484-06	2,4,5-TRIMETHYL BENZOIC ACID [528-90-5] m.w. 164.2 C:72.76 H:7.34	1 & 10 gm
20-8807-03	TRINITROPHENYL-α-AMINO BUTYRIC ACID m.w. 313.20	100 & 500 mg
20-8808-03	TRINITROPHENYL-γ-AMINO BUTYRIC ACID m.w. 313.20	100 & 500 mg
20-8811-03	TRINITROPHENYL-GLY m.w. 286.16	100 & 500 mg
20-8812-03	TRINITROPHENYL-GLY-GLY m.w. 327.21	100 & 500 mg
20-8814-03	ϵ-TRINITROPHENYL-L-LYS (Hci monohydrate) m.w. 411.77	100 & 500 mg
20-8819-03	TRINITROPHENYL-L-TYR m.w. 392.38	100 & 500 mg
20-7225-03	TRITYL-L-CYSTEINE [2799-07-7] m.w. 363.47 m.p. 182-183°C	250 & 500 mg
20-7265-07	5'-O-TRITYLTHYMIDINE m.p. 121-126°C	10 & 25 mg

02-6229-02	TRP-ALA-VAL-GLY-HIS-LEU-MET-NH₂ (Bombesin 8-14)	1 mg
20-2189-02	L-TRP-ASP m.w. 319.31	50 & 100 mg
20-7242-02	L-TRP-GLU m.w. 333.34	50 & 100 mg
20-7243-02	L-TRP-GLY [7360-09-0] m.w. 261.28	100 & 250 mg
20-2190-02	L-TRP-GLY-GLY [230-67-32-5] m.w. 318.33	50 & 100 mg
20-7006-02	L-TRP-GLY-GLY-TYR.H₂O m.w. 499.48 C:57.42 H:5.62 N:13.89	50 & 100 mg
20-7007-02	L-TRP-GLY-GLY-GLY-TYR.H₂O m.w. 556.33 C:56.50 H:5.74 N:14.99	50 & 100 mg
20-7008-02	L-TRP-GLY-GLY-GLY-GLY-TYR.1 1/2 H₂O m.w. 622.58 C:54.10 H:5.90 N:15.61	50 & 100 mg
20-7320-02	L-TRP-GLY-PHE NH₂ .1/2 EtOH (Gastrin-Caerulein sequence) m.w. 406.42 C:64.14 H:6.17 N:15.95 O:13.21	50 & 100 mg
20-7005-02	L-TRP-GLY-TYR m.w. 424.42 C:59.77 H:5.85 N:12.72	50 & 100 mg
20-5153-02	L-TRP-HIS-TRP-LEU-GLN-LEU-LYS-PRO-GLY-GLN-PRO-MET-TYR (a-Factor) m.w. 1715.91	1 & 5 mg
20-7244-02	L-TRP-LEU [13123-35-8] m.w. 317.39	50 & 100 mg
20-7009-02	L-TRP-L-LYS.CH₂COOH.CH₃CN C:57.96 H:7.36 N:15.97	50 & 100 mg
20-3706-02	L-TRP-MET-ASN-PHE NH₂ m.w. 597.70 N:15.58	50 & 100 mg

20-9991-02	L-TRP-MET-ASP-PHE OH	25 & 100 mg
	m.w. 597.68 C:57.94 H:5.85 N:11.58 S:5.41	
20-7246-02	L-TRP-MET-ASP-PHE NH₂	50 & 100 mg
	[1947-37-1] m.w. 595.56 m.p. 242°C (dec) C:57.56 H:6.14 N:13.89 S:5.56	
20-7321-02	L-TRP-MET-GLY-ASP-PHE NH₂ .1 1/2H₂O	25 & 50 mg
	(Gastrin-Caerulein sequence) m.w. 679.71 C:54.79 H:6.79 N:14.17 S:4.61	
20-7322-02	L-TRP-MET-SER-ASP-PHE NH₂	25 & 50 mg
	(Gastrin-Caerulein sequence) m.w. 682.74 C:54.35 H:6.34 N:13.23 S:4.45	
20-2193-02	L-TRP-SER	50 & 100 mg
	m.w. 307.31	
20-7323-02	L-TRP-SER-PHE NH₂	25 & 50 mg
	m.w. 436.45 C:63.45 H:6.39 N:15.72 O:14.64	
11-6082-02	TRP-SER-TYR-GLY-LEU-ARG-PRO-GLY NH₂	1 mg
	(LHRH 3-10)	
20-7142-02	D-TRP-D-TRP	25 & 50 mg
	(Serotonin antagonist) m.w. 390.44 97% by HPLC	
20-7247-02	L-TRP-TRP .H₂O	50 & 100 mg
	[20696-60-0] m.w. 390.44 C:64.90 H:5.78 N:13.75	
20-7248-02	L-TRP-TYR.H₂O	50 & 100 mg
	[19653-76-0] m.w. 376.37 C:64.0 H:6.03 N:11.10	
20-7297-18	TRYPSIN	100 & 500 mg
	(Min. Chymotrypsin) Bov. pancreas	
	[9002-07-7] EC 3.4.21.4 Act: 11,000 BAEE U/mg	
20-7295-18	TRYPSIN 1:75	500 gm & 1 kg
20-7299-18	TRYPSIN	100 mg
	Lima bean inhibitor, salt free Act: 1 mg. inhibits prox. 2.5 mg. trypsin	
	[9035-81-8]	

20-7303-18	TRYPsin Soybean inhibitor, lyoph. Act: prox. 10,500 BAEE Inhibitor u/mg [9035-81-8]	50 & 250 mg
20-3705-03	TRYPtAMINE Hcl [343-94-2] m.w. 196.69 m.p. 248°C	1 & 10 gm
20-7213-03	L-TRYPtOPHAN (Precursor/Nicotinic acid) [73-23-3] m.w. 204.22 m.p. 289°C	10 & 100 gm
20-7215-07	D-TRYPtOPHAN [153-94-6] m.w. 204.23 m.p. 282-285°C	1 & 10 gm
20-7218-03	DL-TRYPtOPHAN [54-12-6] m.w. 204.22 m.p. 289-290°C	10 & 100 gm
20-7222-03	L-TRYPtOPHAN METHYLESTER Hcl [7524-52-9] m.w. 254.71	1 & 10 gm

TRYPtOPHYL DIPEPTIDE KIT see **PEPTIDE KITS**

20-9093-17	(+) TUBOCURARINE CHLORIDE Pentahydrate [57-94-3] m.w. 785.74 m.p. 247-250°C	100 mg
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TUFSTIN see: **THR-LYS-PRO-ARG**

20-7212-03	L-TYROSINE (Adrenaline precur.) [60-18-4] m.w. 181.19 m.p. 342-344°C dec.	100 & 500 gm
20-8803-03	L-TYROSINE HYDROXAMIDE m.w. 196.21 m.p. 161-162°C dec.	250 & 500 mg
20-4599-03	L-TYROSINE BENZYLESTER-p-TOSYLATE [53587-11-4] m.w. 441.50 m.p. 179-181°C	1 & 10 gm
20-7221-03	L-TYROSINE ETHYLESTER Hcl [4089-07-0] m.w. 245.71	10 & 25 gm

20-7223-03	L-TYROSINE METHYLESTER HCl m.p. 193-194°C	5 and 25 gm
20-7227-03	L-TYROSINE-O-METHYLEETHER	500 mg & 1 gm
20-7216-03	D-TYROSINE [556-02-5] m.w. 181.19	1 & 10 gm
20-7219-03	DL-TYROSINE [556-03-6] m.w. 181.19 m.p. 316°C	10 & 25 gm
20-7233-03	L-TYROSYL-b-NAPHTHYLAMIDE m.w. 306.36 m.p. 210-213°C	250 & 500 mg
20-7522-02	L-TYR-ALA-ARG.CH₃COOH (Brain Peptide) m.w. 468.52 C:50.70 H:6.79 N:18.36	25 & 50 mg
20-5154-02	L-TYR-ALA-ASP-SER-GLY-GLU-GLY-ASP-PHE-LEU-ALA-GLU-GLY-GLY-GLY-VAL-ARG (L-Tyr Fibrinopeptide A) m.w. 1699.75	1 mg
20-7374-02	L-TYR-D-ALA-GLY-PHE-MET (Brain peptide) m.w. 587.71 C:57.0 H:11.95 S:5.3	10 & 25 mg
20-7446-02	L-TYR-D-ALA-GLY-PHE-METHYL-MET-NH₂CH₃COOCH (Modified Enkephalin) m.w. 660.8	10 & 25 mg
20-7376-02	L-TYR-D-ALA-GLY-PHE-MET(O)-ol.CH₃COOH C:55.8 H:6.51 N:11.1 S:5.1	10 & 25 mg
20-7370-02	L-TYR-D-ALA-GLY-PHE-MET-ol.CH₃COOH ((D-Ala ² -ol)-Met Enkephalin)) m.w. 633.78 C:57.2 H:6.86 N:11.2 S:5.2	10 & 25 mg
20-5292-02	TYR-D-ALA-PHE-GLY-TYR-PRO-SER-NH₂ (Demorphin)	1 & 5 mg
20-7525-03	L-TYR-ARG.CH₃COOH (Kyotorphin) m.w. 397.41 C:51.12 H:6.95 N:17.31	50 & 100 mg
20-5155-02	L-TYR-D-ARG (Kyotorphin analog) m.w. 337.37	50 & 100 mg

20-8354-02	TYR-ARG-ASP-TYR(SO₃H)-THR-GLY-TRP-NLE-ASP-PHE-NH₂ (Tyr-Arg ¹) Nona CCK m.w. 1431.6	1 & 2.5 mg
20-6633-02	TYR-ARG-PRO-PRO-GLY-PHE-SER-PRO-PHE-ARG (Tyr-Bradykinin) m.w. 1223.5	1 mg
20-2720-02	TYR-ASP-TYR(SO₃H)-THR-GLY-TRP-NLE-ASP-PHE-NH₂ m.w. 1292.4 (Tyr-Nona-CCK 26-33)	1 & 5 mg
20-7236-02	LL-TYR-GLU [673-08-5] m.w. 310.28	50 & 100 mg
20-7237-02	L-TYR-GLY m.w. 238.24	100 & 250 mg
20-2721-02	D-TYR-GLY-ASP-TYR(SO₃H)-NLE-GLY-TRP-NLE-ASP-PHE.NH₂.2NH₃ (Tyr-Gly (Nle ^{28,31}) - CCK 26-33) m.w. 1361.5	1 & 5 mg
20-6301-02	H-TYR-GLY-CYS-LYS-ASN-PHE-PHE-TRP-LYS-THR-PHE-THR-SER-CYS-OH (Tyr ¹ Somatostatin) m.w. 1731.0	1 mg
20-6394-02	L-TYR(SO₃H)-GLY-GLY-PHE-LEU-NH₃ (Sulfated Leu-Enkephalin) m.w. 652.7 (98% by HPLC)	5 & 10 mg
05-6890-02	TYR-GLY-GLYPHE-LEU-ARG (Leu-Enkephalin Arg) (Dynorphin 1-6)	1 mg
20-5156-02	L-TYR-GLY-GLY-PHE-LEU-ARG-ARG-ILE-ARG-PRO-LYS-LEU-LYS m.w. 1603.90 (Dynorphin 1-13)	1 & 2 mg
14-7566-02	TYR-GLY-GLY-PHE-LEU-ARG-LYS-TYR-PRO (b-Neoendorphin)	1 mg
14-7565-02	TYR-GLY-GLY-PHE-LEU-ARG-TRP (a-Neoendorphin 1-8)	1 mg
20-8480-02	L-TYR-GLY-GLY-PHE-LEU-LYS-OH.AcOH (Leu-Enkephalin-Lys)	1 mg

20-8842-02	L-TYR-GLY-GLY-PHE-MET (Met Enkephalin) m.w. 573.63 C:56.20 H:6.21 N:12.20 S:5.39	50 & 100 mg
05-6891-02	TYR-GLY-GLY-PHE-MET-ARG-ARG (Met-Enkephalin Arg Arg)	1 mg
16-7590-02	TYR-GLY-GLY-PHE-MET-ARG-ARG-VAL-GLY-ARG-PRO-GLU-TRP-TRP-MET-ASP-TYR-GLN-LYS-ARG-TYR-GLY-GLY-PHE-LEU (Peptide E)	0.5 mg
05-6892-02	TYR-GLY-GLY-PHE-MET-ARG-GLY-LEU (Met Enkephalin Arg-Gly-Leu)	1 mg
05-6091-02	TYR-GLY-GLY-PHE-MET-THR-SER-GLU-LYS-SER-GLN-THR-PRO-LEU-VAL-TYR (a-Endorphin)	1 mg
20-7238-02	L-TYR-LEU.H₂O [17355-10-1] m.w. 294.35 C:57.88 H:7.67 N:8.93	50 & 100 mg
20-7239-02	L-TYR-LYS m.w. 309.35 C:58.27 H:7.51 N:13.37	50 & 100 mg
20-3709-02	L-TYR-LYS-THR m.w. 410.46	50 & 100 mg
20-4042-02	L-TYR-L-MET m.w. 312.4 C:53.66 H:6.94 N:18.55 S:5.96	25 & 100 mg
01-5997-02	TYR-MET-GLU-HIS-PHE-ARG-TRP (Tyr-ACTH 4-9)	5 mg
01-5988-02	TYR-MET-GLU-HIS-PHE-ARG-TRP-GLY (Tyr-ACTH 4-10)	1 mg
20-7304-02	L-TYR(SO₃/Ba)-MET-GLY-ASP Ba/2 m.w. 699.95 C:33.92 H:3.88 N:7.86	10 & 25 mg
20-7372-02	L-TYR-D-MET-GLY-PHE-PRO NH₂COOH (Brain Peptide) m.w. 672.82 C:57.0 H:6.49 N:12.7 S:4.8	10 & 25 mg

20-2763-02	L-TYR(SO₃)-MET-GLY-TRP-MET-ASP NH₂ (Sulfated CCK 27-32) m.w. 1016.4	10 & 50 mg
20-7375-02	L-TYR-MET-GLY-TRP-MET-ASP-PHE NH₂ (CCK 27-33) m.w. 947.07 C:55.96 H:5.95 N:12.99 S:6.62	5 & 10 mg
20-6611-02	TYR(SO₃H)-MET-GLY-TRP-MET-ASP-PHE NH₂.NH₃ (CCK 27-33) m.w. 1062.30	10 & 25 mg
20-7521-02	L-TYR-PHE-ARG.CH₃COOH (Brain Peptide) m.w. 544.62 C:57.21 H:6.79 N:15.337	25 & 50 mg
14-7572-02	TYR-PHE-LEU-PHE-ARG-PRO-ARG-ASN-NH₂ (Neuromedin U ⁸)	0.5 mg
20-7523-02	L-TYR-PRO-PHE-ARG.CH₃COOH m.w. 641.74 C:57.55 H:6.64 N:15.49	25 & 50 mg
20-5157-02	L-TYR-PRO-PHE-PRO (b Casomorphin 1-4) m.w. 522.57	10 & 25 mg
20-5158-02	L-TYR-PRO-PHE-PRO-GLY-PRO-ILE (b Casomorphin) m.w. 789.90	5 & 10 mg
20-6634-02	TYR-PRO-PHE-VAL-GLU-PRO-ILE OH (Human b-Casomorphin)	2.5 mg
20-7240-02	L-TYR-TRP.1 1/2 H₂O m.w. 367.40 C:61.67 H:6.12 N:10.76	50 & 100 mg
20-5539-02	L-TYR-D-TRP-ALA-TRP-D-PHE NH₂ (GHR Peptide) m.w. 771.8	2 & 5 mg
20-7241-02	L-TYR-TYR semihydrate m.w. 335.34 C:61.64 H:5.96 N:7.92	50 & 100 mg
20-3711-02	L-TYR-TYR-TYR m.w. 507.53	50 & 100 mg
20-8481-02	D-TYR-VAL NH₂	25 & 100 mg
20-8482-02	D-TYR-VAL-GLY-OH	25 & 100 mg

20-3134-02 **TYR-VAL-GLY-VAL-ALA-PRO-GLY**

5 & 10 mg

m.w. 661.8 HPC: 99+%

20-5159-02 **L-TYR-VAL-MET-GLY-HIS-PHE-ARG-TRP-ASP-ARG-PHE-GLY**

10 & 25 mg

(g-MSH) m.w. 150.76

U

19-6770-16	UNDECYL SODIUM SULFATE	5 & 10 gm
21-7626-16	UNDECYL SODIUM SULFONATE m.w. 258.36	5 & 10 gm
21-7608-07	URACIL, Anhydrous , cryst. m.w. 112.1	25 & 100 gm
21-7620-07	URIDINE-5'-TRIPHOSPHATE Sodium [19817-92-6] m.w. 586.2	100 & 500 mg
21-7621-07	URIDYLIC ACID Sodium 3'(2') mixed isomers m.w. 386.2	1 & 5 gm
21-7455-06	UROCANIC ACID 99% [104-98-3] m.p. 226-228°C	1 & 5 gm

V

22-7852-03	L-VALINE [72-18-4] m.w. 117.15 m.p. 315°C	10 & 50 gm
22-7853-03	D-VALINE [640-68-6] m.w. 117.15	500 mg & 1 gm
22-7854-03	DL-VALINE [516-06-3] m.w. 117.15 m.p. 298°C	25 & 100 gm
22-5780-02	L-VAL-7-AMIDO-4-METHYLCOUMARIN	10 mg
22-4601-03	L-VALINE BUTYLESTER	1 & 10 gm
22-8250-03	L-VALINE BENZYLESTER-p-TOSYLATE m.w. 279.48	500 mg & 1 gm
22-4600-03	D-VALINE BENZYLESTER-p-TOSYLATE m.w. 279.48	500 mg & 1 gm
22-7300-02	VAL-ARG-LYS-ARG-THR-LEU-ARG-ARG-LEU HCl (Substrate for Proteinkinase C) m.w. 1142.5 (s/o HCl)	2.5 & 5 mg
22-7855-02	L-VAL-GLY [686-43-1] m.w. 174.20	100 & 250 mg
22-9101-02	L-VAL-GLY-HIS-LEU-MET-NH₂.CH₃COOH (Bombesin 10-14) m.w. 613.73 C:49.62 H:7.35 N:17.91 S:5.49	10 & 25 mg
22-7015-02	L-VAL-GLY-SER-GLU (Epsinophilactic tetrapeptide) m.w. 390.39	10 & 25 mg
22-1918-02	L-VAL-ILE m.w. 230.31 [20556-14-3]	100 & 250 mg
16-7658-02	VAL-ILE-HIS-ASN acetate (Preangiotensin 11-14, Human)	1 mg
22-5782-02	D-VAL-L-LEU-L-LYS-7-AMIDO-4-METHYLCOUMARIN salt (Plasmin substrate)	10 mg

22-7860-02	D-VAL-D-LYS-HCl m.w. 281.78	25 & 50 mg
22-7856-02	L-VAL-MET m.w. 248.33 [14486-09-0]	100 & 250 mg
22-5781-02	L-VAL-4-METHOXY-b-NAPHTHYLAMIDE HCl	50 mg
22-7861-02	L-VAL-D-PHE m.w. 266.34	50 & 100 mg
22-7862-02	D-VAL-L-PHE m.w. 266.34	25 & 50 mg
22-7863-02	D-VAL-D-PHE m.w. 266.34	25 & 50 mg
22-7877-02	VAL-SER-GLN-ASN-TYR-PRO-ILE-VAL HIV Protease substrate	1 mg
22-3713-02	L-VAL-TYR-VAL m.w. 379.43	50 & 100 mg
22-7857-02	L-VAL-VAL m.w. 216.28	100 & 250 mg
22-5783-02	L-VAL-VAL-GLU m.w. 345.38	10 & 25 mg
22-5784-02	L-VAL-VAL-GLN m.w. 360.38	10 & 25 mg
22-5785-02	D-VAL-D-VAL-D-VAL m.w. 315.41	25 & 50 mg
22-3714-02	L-VAL-VAL-VAL m.w. 315.41	50 & 100 mg
22-3715-02	L-VAL-VAL-VAL-VAL m.w. 414.55	25 & 50 mg
22-6168-21	VANCOMYCIN HCl m.w. 1485.69 (S. orientalis) [1404-93-9]	100 & 250 mg

22-6176-06 **VANILLIN 99%** 25 & 50 gm

m.w. 152.15 m.p. 81-83°C [121-33-5]

VASOINTESTINAL PEPTIDE (VIP, 17-NLE)

22-6297-02

(His-Ser-Asp-Ala-Val-Phe-Thr-Asp-Asn-Tyr-Thr-Arg-Leu-Arg-Lys-Gln-Nle-Ala-Val-Lys-Lys-Tyr-Leu-Asn-Ser-Ile-Leu-Asn-NH₂.acetate)

Lot: Typical m.w. 3307.8 (C₁₄₈H₂₄₀N₄₄O₄₂) Peptide Content: 86% Availability: 500 ug, 1/ 2.5 mg

Purity: of peptide material 100%

Amino Acid Analysis: Asp: 4.93; Thr: 2.04; Ser: 2.00; Glu: 1.03; Ala: 2.00; Val: 1.94; Ile: 1.00; Leu: 2.95; Phe: 0.98; His: 1.04; Lys: 2.95; Arg: 2.03; Nle/Tyr: 2.88

Enzymological: Asp: 1.99; Asn: 2.87; Glu: 0; Gln: 0.94

Solubility: Water

Storage: Store at -20°C

22-8051-02 **VASOPRESSIN** 1 mg

(ARG⁸) synth. (Bovine) m.w. 1084 150 iu/ml.

01-2133-02 **VASOTOCIN** 1 mg

(ARG⁸)

22-1096-21 **VIRGINIAMYCIN M1** 1 mg

(S.mitakaenis) m.w. 525.6

22-7961-25 **VITAMIN A ACID** 500 mg & 1 gm

m.w. 300.44 95% all-trans 5% 13-cis 3.3 miu/gm [302-79-4]

22-7963-25 **VITAMIN A ALCOHOL**, Cryst. 1 gm

m.w. 286.46 95% all-trans 5% cis 3.3 miu/gm [68-26-8]

22-7965-25 **VITAMIN A ACETATE**, synth. 1 & 10 gm

m.w. 328.50 95% all-trans 5% cis 2.9 USP u/gm [127-47-9]

22-7962-25 **VITAMIN A PALMITATE** 99% 5 & 25 gm

m.w. 524.88 1.75 miu/gm [79-81-2]

22-7951-25	VITAMIN B1 (Thiamine Hcl) m.w. 337.27 m.p. 260°C dec. [67-03-8]	50 & 250 gm
	VITAMIN B2 (Riboflavin) m.w. 376.38 m.p. 290°C dec. [83-88-5]	10 & 100 gm
	Vitamin B6 see: Pyridoxine Hcl	
22-7920-25	VITAMIN B12 cryst. m.w. 1355.39 (Cyanocobalamine) [68-19-9]	100 mg & 1 gm
22-7925-25	VITAMIN B₁₂B m.w. 1382.84 (Hydroxocobalamine) 99% by U.V. [13422-52-1]	100 mg & 1 gm
22-3260-25	VITAMIN B15 (Pangamic acid) [11006-56-7]	1 & 10 gm
	VITAMIN B15 Calcium salt (Mixture)	10 & 25 gm
	VITAMIN BT see: DL-CARNITINE	
	VITAMIN C see: ASCORBIC ACID	
22-7966-25	VITAMIN D2 (Calciferol) 99% m.w. 396.66 m.p. 114-116°C 40 miu/gm [50-14-6]	1 & 5 gm
22-7967-25	VITAMIN D3 (7-dehydrocholesterol, activated) m.w. 384.65 m.p. 145-150°C [67-97-0]	1 gm
22-7954-25	VITAMIN E acetate (D-form) (D-Tocopherol acetate)) m.w. 472.75 [7695-91-2]	500 mg & 1 gm
22-7956-25	VITAMIN E (DL-form) (DL-Tocopherol) m.w. 430.72 97% min.	10 & 50 gm
	VITAMIN E acetate (DL-form) m.w. 472.75 250 IU Vit.E/gm. [7695-91-2]	5 & 10 gm

VITAMIN H see: **D-BIOTIN**

22-7969-25	VITAMIN K1 (Phytamenadione) 98% m.w. 450.68 [84-80-0]	250 mg & 1 gm
22-7970-25	VITAMIN K3 (Menadione) 98% m.w. 172.19 m.p. 105-107°C [58-27-5]	25 & 100 gm
22-7988-25	VITAMIN K4 diacetate (Menadiol) [573-20-6]	5 & 25 gm
22-7971-25	VITAMIN K5 (2-Methyl-4-amino-1-naphthol HCl) [83-70-5]	1 & 10 gm

VITAMIN M see: **FOLIC ACID****VITAMIN PP** see: **NICOTINAMIDE**

X

24-8205-07	XANTHOSINE , Anhydrous, cryst. m.w. 284.2 [5968-90-1]	1 & 10 gm
24-5787-02	XENOPSIN (Pyroglu-Gly-Lys-Arg-Pro-Trp-Ile-Leu)	1 mg
24-5789-06	XYLAZINE , base	1 & 5 gm
24-5790-06	XYLAZINE Hcl	1 & 5 gm
24-8201-04	D-XYLITOL m.w. 152.15 m.p. 93-95°C [16277-71-7]	50 & 100 gm
24-8202-04	L-XYLOSE m.w. 150.13 [609-06-3]	1 & 10 gm
24-8203-04	D-XYLOSE , purified m.w. 150.13 [58-86-6]	25 & 100 gm
24-5750-04	D(+) - XYLULOSE , syrup m.w. 150.13 [551-84-8]	25 & 100 mg

Y

25-5659-30	YEAST, BREWERS	1 & 10 kg
25-5660-30	YEAST EXTRACT Powder [8013-01-2]	100 gm & 1 kg
25-9094-17	YOHIMBINE HCL (99.9%) [65-19-0] m.w. 390.90 rot: +101.8°	500 mg & 1 gm

Z

26-3820-06	ZEARALENOL [36455-72-8] m.w. 320.2	1 mg
26-3821-06	ZEARALENONE [17924-92-4] m.w. 318.36	5 mg
26-8502-06	ZEPHIRAMINE [139-08-2]	1 & 5 gm
26-8503-06	ZINCON [135-52-4]	1 & 10 gm