

Peptide Array, Dengue Virus Type 1 (DEN-1), Singapore/S275/1990, NS3 Protein

Catalog No. NR-2752

This reagent is the tangible property of the U.S. Government.

Product Description: The 106-peptide array spans the NS3 protein of Dengue virus type 1, Singapore/S275/1990 (GenPept: P33478). Peptides are 14- to 17-mers, with 11 or 12 amino acid overlaps.

Lot: 336995 to 337100

The following information applies to all peptides:

- Appearance White lyophilized powder
- Mass spectral analysis Correct MW by Electrospray
- Counter Ion Trifluoroacetate

Peptide-specific information is shown in the two tables below.

Table 1						
Peptide	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Purity by HPLC ^a	Peptide Content ^b
1 of 106	11/27/06	17	1 SGVLWDTPSPPEVERAV 17	1839.0	96.6%	87.0%
2 of 106	11/27/06	17	7 TPSPPEVERAVLDDGIY 23	1858.0	88.9%	82.0%
3 of 106	11/27/06	17	13 VERAVLDDGIYRIMQRG 29	1991.3	91.1%	81.1%
4 of 106	12/01/06	17	19 DDGIYRIMQRGLLGRSQ 35	1978.3	93.5%	76.3%
5 of 106	11/29/06	17	25 IMQRGLLGRSQVGVGVF 41	1817.2	73.1%	79.0%
6 of 106	11/30/06	17	31 LGRSQVGVGVFQDGVFVH 47	1802.0	85.1%	76.0%
7 of 106	11/24/06	17	37 GVGVFQDGVFHTMWHVT 53	1917.2	82.7%	76.3%
8 of 106	11/25/06	17	43 DGVFHTMWHVTRGAVLM 59	1957.3	83.5%	66.9%
9 of 106	11/27/06	17	49 MWHVTRGAVLMYQ GKRL 65	2046.5	94.4%	80.7%
10 of 106	11/28/06	16	55 GAVLMYQ GKRLPSWA 70	1806.1	93.4%	77.8%
11 of 106	11/27/06	17	60 YQ GKRLPSWASVKKDL 76	2005.3	98.6%	73.6%
12 of 106	12/01/06	17	65 LPSWASVKKDLISYGG 81	1850.1	95.9%	75.8%
13 of 106	11/27/06	17	71 SVKKDLISYGGGWR FQG 87	1898.2	94.9%	77.1%
14 of 106	12/06/06	17	77 ISYGGGWR FQGSWNTGE 93	1902.0	70.0%	74.5%
15 of 106	12/06/06	17	83 WRFQGSWNTGEEVQVIA 99	2007.2	81.2%	81.4%
16 of 106	11/25/06	17	89 WNTGEEVQVIAVEPGKN 105	1870.1	81.5%	76.7%
17 of 106	11/22/06	17	95 VQVIAVEPGKNPKNVQT 111	1821.1	89.0%	75.1%
18 of 106	11/22/06	17	100 VEPGKNPKNVQTAPGTF 116	1784.0	89.2%	75.3%
19 of 106	11/27/06	17	106 PKNVQTAPGTFKTP EGE 122	1801.0	85.1%	78.2%
20 of 106	11/30/06	17	112 APGTFKTP EGVGAIAL 128	1657.9	89.9%	81.7%

Table 1						
Peptide	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Purity by HPLC ^a	Peptide Content ^b
21 of 106	11/22/06	17	118 TPEGEVGAIALDFKPGT 134	1701.9	81.2%	77.3%
22 of 106	11/21/06	17	124 GAIALDFKPGTSGSPIV 140	1629.9	93.3%	76.7%
23 of 106	11/23/06	17	130 FKPGTSGSPIVNREGKI 146	1787.1	88.3%	69.1%
24 of 106	11/25/06	17	136 GSPIVNREGKIVGLYGN 152	1773.0	82.5%	67.9%
25 of 106	12/01/06	16	142 REGKIVGLYGNVVT 157	1662.9	90.4%	85.1%
26 of 106	11/22/06	16	147 VGLYGNVVTTSPTYV 162	1586.8	88.1%	82.4%
27 of 106	12/18/06	17	152 NGVVTTSPTYVSAIAQA 168	1638.8	52.9%	67.6%
28 of 106	12/22/06	17	158 SPTYVSAIAQAKASQEG 174	1667.8	62.2%	74.7%
29 of 106	11/17/06	17	164 AIAQAKASQEGPLPEIE 180	1752.0	94.6%	81.9%
30 of 106	11/29/06	17	170 ASQEGPLPEIEDEVFRK 186	1944.2	81.2%	82.3%
31 of 106	11/27/06	17	176 LPEIEDEVFRKRNLTIM 192	2103.5	93.7%	80.7%
32 of 106	11/25/06	17	181 DEVFRKRNLTIMDLHPG 197	2041.4	91.9%	70.6%
33 of 106	11/27/06	17	187 RNLTIMDLHPGSGKTRR 203	1952.3	90.5%	69.4%
34 of 106	11/27/06	17	193 DLHPGSGKTRRYLPAIV 209	1880.2	80.9%	74.6%
35 of 106	11/27/06	17	199 GKTRRYLPAIVREAIRR 215	2055.5	97.4%	72.6%
36 of 106	11/24/06	17	205 LPAIVREAIRRNVRTL 221	1990.4	97.4%	75.7%
37 of 106	11/27/06	17	210 REAIRRNVRTLILAPTR 226	2035.4	90.6%	80.5%
38 of 106	11/30/06	17	216 NVRTLILAPTRVASEM 232	1870.3	80.4%	67.8%
39 of 106	11/27/06	17	222 LAPTRVASEMAEALKG 238	1743.1	87.0%	83.1%
40 of 106	12/01/06	17	228 VASEMAEALKGMPYRQ 244	1894.3	92.9%	80.4%
41 of 106	12/02/06	17	233 AEALKGMPYRQTAVK 249	1877.2	92.3%	78.8%
42 of 106	11/28/06	17	239 MPYRQTAVKSEHTGK 255	1947.3	92.6%	75.3%
43 of 106	11/25/06	17	245 TAVKSEHTGKEIVDLM 261	1859.1	90.0%	62.3%
44 of 106	11/28/06	17	250 SEHTGKEIVDLMCHATF 266	1918.2	84.2%	72.6%
45 of 106	11/30/06	17	255 KEIVDLMCHATFTMRL 271	2021.5	89.6%	79.5%
46 of 106	11/22/06	16	261 MCHATFTMRLSPVRV 276	1862.3	96.1%	73.5%
47 of 106	11/23/06	17	266 FTMRLSPVRVPNYNMI 282	2051.5	95.5%	84.0%
48 of 106	11/23/06	17	272 SPVRVPNYNMIIMDEAH 288	1986.3	96.3%	75.0%
49 of 106	12/20/06	16	278 NYNMIIMDEAHFTDPA 293	1882.1	81.0%	87.9%
50 of 106	12/01/06	17	283 IMDEAHFTDPASIARRG 299	1887.1	96.1%	76.0%
51 of 106	12/01/06	17	289 FTDPSIARRGYISTRV 305	1910.2	96.6%	75.2%
52 of 106	11/24/06	17	295 IARRGYISTRVGMGEAA 311	1808.1	88.4%	70.0%
53 of 106	12/02/06	17	301 ISTRVGMGEAAAFMTA 317	1726.1	82.7%	69.7%
54 of 106	12/02/06	17	307 MGEAAAFMTATPPGSV 323	1651.0	87.7%	91.4%
55 of 106	12/05/06	16	313 IFMTATPPGSVEAFPQ 328	1693.0	89.1%	81.7%
56 of 106	11/29/06	17	318 TPPGSVEAFPQSNVAV 334	1741.9	92.9%	81.5%
57 of 106	11/28/06	17	323 VEAFPQSNVAVIQDEER 339	1947.1	92.0%	76.4%
58 of 106	11/27/06	17	329 SNAVAVIQDEERDIPERS 345	2044.2	88.0%	73.8%
59 of 106	11/27/06	17	335 DEERDIPERSWNSGYEW 351	2168.2	94.9%	67.4%
60 of 106	11/27/06	17	341 PERSWNSGYEWITDFPG 357	2041.2	95.2%	84.4%
61 of 106	12/04/06	17	347 SGYEWITDFPGKTVWFV 363	2032.3	95.4%	75.8%
62 of 106	12/04/06	17	353 TDFPGKTVWFVPSIKSG 369	1866.2	95.7%	74.7%
63 of 106	12/04/06	16	359 TVWFVPSIKSGNDIAN 374	1748.0	93.4%	86.3%
64 of 106	11/27/06	17	364 PSIKSGNDIANCLRKN 380	1787.0	96.2%	70.5%

Table 1						
Peptide	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Purity by HPLC ^a	Peptide Content ^b
65 of 106	11/22/06	17	370 NDIANCLRKNGKRVIQL 386	1955.3	97.0%	77.6%
66 of 106	11/24/06	17	376 LRKNGKRVIQLSRKTFD 392	2059.5	95.9%	73.1%
67 of 106	11/25/06	17	382 RVIQLSRKTFDTEYQKT 398	2113.4	88.2%	81.5%
68 of 106	11/20/06	17	388 RKTDFDTEYQKTKNNDWD 404	2189.3	95.1%	78.2%
69 of 106	11/25/06	17	393 TEYQKTKNNDWDYVVT 409	2105.3	93.9%	74.2%
70 of 106	11/28/06	17	399 KNNDWDYVVTDDISEMG 415	1987.2	96.9%	83.7%
71 of 106	12/01/06	17	405 YVVTDDISEMGANFRAD 421	1889.1	89.9%	73.5%
72 of 106	11/23/06	17	411 ISEMGANFRADRVIDPR 427	1947.2	92.1%	72.8%
73 of 106	11/30/06	17	417 NFRADRVIDPRRCLKPV 433	2055.4	93.0%	74.0%
74 of 106	11/27/06	16	423 VIDPRRCLKPVILKDG 438	1822.3	98.0%	79.8%
75 of 106	12/05/06	17	428 RCLKPVILKDGPERVIL 444	1949.4	94.6%	77.5%
76 of 106	12/04/06	17	434 ILKDGPERVILAGPMPV 450	1805.2	93.9%	80.8%
77 of 106	11/30/06	17	439 PERVILAGPMPVTVASA 455	1708.1	86.6%	86.9%
78 of 106	11/27/06	17	445 AGPMPVTVASAAQRRGR 461	1725.0	92.4%	75.4%
79 of 106	11/27/06	17	451 TVASAAQRRGRIGRNQN 467	1855.1	88.8%	71.0%
80 of 106	11/28/06	17	456 AQRGRIGRNQNKEGDQ 472	1983.2	87.1%	73.3%
81 of 106	11/30/06	17	462 IGRNQNKEGDQYVYMGQ 478	2000.2	89.8%	83.9%
82 of 106	11/30/06	17	468 KEGDQYVYMGQPLNND 484	2000.1	95.6%	90.3%
83 of 106	11/30/06	17	474 VYMGQPLNNDHHAHW 490	2027.2	87.9%	81.6%
84 of 106	12/08/06	17	480 LNNDHHAHWTEAKMLL 496	2037.3	88.3%	70.0%
85 of 106	11/23/06	16	486 HAHWTEAKMLLDNINT 501	1894.2	85.3%	72.2%
86 of 106	11/23/06	17	490 TEAKMLLDNINTPEGII 506	1872.2	93.9%	79.9%
87 of 106	11/27/06	16	496 LDNINTPEGIIPALFE 511	1756.0	89.6%	82.7%
88 of 106	11/29/06	16	501 TPEGIIPALFEPEREK 516	1826.1	95.9%	81.6%
89 of 106	12/01/06	17	506 IPALFEPEREKSAIDG 522	1843.1	94.2%	71.1%
90 of 106	11/23/06	17	512 PEREKSAIDGEYRLRG 528	1947.2	90.3%	67.0%
91 of 106	11/23/06	17	518 AIDGEYRLRGEARKTF 534	1953.2	88.4%	71.1%
92 of 106	11/21/06	17	524 YRLRGEARKTFVELMRR 540	2181.6	82.3%	77.9%
93 of 106	11/27/06	17	530 ARKTFVELMRRGDLPVW 546	2074.5	98.8%	79.1%
94 of 106	12/04/06	17	535 VELMRRGDLPVWLSYKV 551	2061.5	97.5%	62.2%
95 of 106	12/06/06	17	541 GDLPVWLSYKVASEGFQ 557	1896.2	96.0%	66.7%
96 of 106	12/07/06	17	547 LSYKVASEGFQSDRRW 563	2092.3	81.5%	69.9%
97 of 106	12/06/06	17	553 SEGFQSDRRWCFDGER 569	2138.3	92.0%	78.4%
98 of 106	12/08/06	17	559 SDRRWCFDGERNNQVLE 575	2124.3	96.5%	90.7%
99 of 106	11/27/06	17	565 FDGERNNQVLEENMDVE 581	2038.2	94.3%	77.7%
100 of 106	12/02/06	17	571 NQVLEENMDVEMWTKEG 587	2052.3	67.3%	85.8%
101 of 106	11/27/06	17	577 NMDVEMWTKEGERKCLR 593	2150.5	93.8%	71.3%
102 of 106	11/29/06	17	583 WTKEGERKCLRPRWLDA 599	2169.5	95.2%	68.6%
103 of 106	12/04/06	16	589 RKKLRPRWLDARTYSD 604	2061.4	86.9%	70.7%
104 of 106	12/04/06	17	594 PRWLDARTYSDPLALRE 610	2059.3	97.5%	72.3%
105 of 106	12/04/06	17	600 RTYSDPLALREFKEFAA 616	2014.3	96.2%	61.7%
106 of 106	12/18/06	14	606 LALREFKEFAAGRR 619	1664.0	95.3%	74.0%

^a% full-length
^bRemainder is salt and water

Table 2 - Amino Acid Analysis

Peptide		Ala (A)	Arg (R)	Asx (N,D)	Cys (C)	Glx (Q,E)	Gly (G)	His (H)	Ile (I)	Leu (L)	Lys (K)	Met (M)	Phe (F)	Pro (P)	Ser (S)	Thr (T)	Trp (W)	Tyr (Y)	Val (V)
1 of 106	Expected	1.00	1.00	1.00		2.00	1.00			1.00				3.00	2.00	1.00	1.00		3.00
	Actual	1.04	1.08	1.00		2.05	1.00			0.99				3.31	1.70	0.85	0.00 ^a		3.27
2 of 106	Expected	1.00	1.00	2.00		2.00	1.00		1.00	1.00				3.00	1.00	1.00		1.00	2.00
	Actual	1.08	1.05	2.18		2.00	1.09		1.06	1.08				3.33	1.00	0.89		1.01	2.35
3 of 106	Expected	1.00	3.00	2.00		2.00	2.00		2.00	1.00		1.00						1.00	2.00
	Actual	0.95	2.91	2.00		2.02	1.97		1.94	0.99		1.01						1.03	1.85
4 of 106	Expected		3.00	2.00		2.00	3.00		2.00	2.00		1.00			1.00			1.00	
	Actual		3.16	2.12		2.00	3.22		2.04	2.13		1.10			0.88			0.98	
5 of 106	Expected		2.00			2.00	4.00		1.00	2.00		1.00	1.00		1.00				3.00
	Actual		2.00			2.21	4.69		0.86	2.00		0.91	1.00		0.92				3.59
6 of 106	Expected		1.00	1.00		2.00	4.00	1.00		1.00			2.00		1.00				4.00
	Actual		1.03	1.11		2.18	4.26	1.08		1.00			1.93		0.84				4.66
7 of 106	Expected			1.00		1.00	3.00	2.00				1.00	2.00			2.00	1.00		4.00
	Actual			0.97		1.00	2.75	2.08				1.01	1.88			2.02	0.00 ^a		3.76
8 of 106	Expected	1.00	1.00	1.00			2.00	2.00		1.00		2.00	1.00			2.00	1.00		3.00
	Actual	1.06	1.03	1.00			2.06	2.02		1.11		2.04	0.99			1.96	0.00 ^a		2.98
9 of 106	Expected	1.00	2.00			1.00	2.00	1.00		2.00	1.00	2.00				1.00	1.00	1.00	2.00
	Actual	0.94	1.83			1.00	1.86	0.90		1.99	0.93	1.83				0.83	0.00 ^a	0.98	1.81
10 of 106	Expected	2.00	1.00			2.00	2.00			2.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
	Actual	2.04	1.05			2.16	2.05			2.18	1.04	1.00		1.04	0.81		0.00 ^a	1.06	0.99
11 of 106	Expected	1.00	1.00	1.00		2.00	1.00			2.00	3.00			1.00	2.00		1.00	1.00	1.00
	Actual	1.01	1.14	1.02		1.86	1.00			2.00	3.01			0.88	1.67		0.00 ^a	0.92	1.06
12 of 106	Expected	1.00		1.00		1.00	2.00		1.00	2.00	2.00			1.00	3.00		1.00	1.00	1.00
	Actual	1.01		0.94		0.94	2.01		0.96	2.00	2.01			1.03	2.42		0.00 ^a	0.90	1.06
13 of 106	Expected		1.00	1.00		1.00	4.00		1.00	1.00	2.00		1.00		2.00		1.00	1.00	1.00
	Actual		1.14	0.98		0.95	4.09		0.97	1.00	2.00		0.92		1.61		0.00 ^a	0.92	1.05
14 of 106	Expected		1.00	1.00		2.00	5.00		1.00				1.00		2.00	1.00	2.00	1.00	
	Actual		1.15	1.04		2.00	5.50		1.00				1.03		1.78	0.87	0.00 ^a	0.97	
15 of 106	Expected	1.00	1.00	1.00		4.00	2.00		1.00				1.00		1.00	1.00	2.00		2.00
	Actual	1.20	1.10	1.05		4.00	2.17		0.91				1.01		0.94	0.94	0.00 ^a		2.08
16 of 106	Expected	1.00		2.00		4.00	2.00		1.00		1.00			1.00		1.00	1.00		3.00
	Actual	1.19		2.00		4.33	2.10		0.99		1.11			1.12		0.82	0.00 ^a		3.11
17 of 106	Expected	1.00		2.00		3.00	1.00		1.00		2.00			2.00		1.00			4.00
	Actual	0.95		2.05		3.05	1.00		0.81		1.96			1.96		0.98			3.69
18 of 106	Expected	1.00		2.00		2.00	2.00				2.00		1.00	3.00		2.00			2.00
	Actual	1.03		2.01		2.00	2.02				1.93		1.06	2.97		2.01			1.92
19 of 106	Expected	1.00		1.00		3.00	2.00				2.00		1.00	3.00		3.00			1.00
	Actual	1.07		1.06		3.00	1.94				1.99		1.03	3.06		2.87			1.04
20 of 106	Expected	3.00				2.00	3.00		1.00	1.00	1.00		1.00	2.00		2.00			1.00
	Actual	2.86				2.00	2.78		0.98	1.05	0.88		0.90	1.86		1.74			0.99
21 of 106	Expected	2.00		1.00		2.00	3.00		1.00	1.00	1.00		1.00	2.00		2.00			1.00
	Actual	1.94		1.15		1.87	3.00		0.95	1.17	1.11		1.13	2.00		1.93			0.91
22 of 106	Expected	2.00		1.00			3.00		2.00	1.00	1.00		1.00	2.00	2.00	1.00			1.00
	Actual	2.10		1.11			3.27		2.08	1.13	1.04		1.06	2.32	1.65	1.00			1.08
23 of 106	Expected		1.00	1.00		1.00	3.00		2.00		2.00		1.00	2.00	2.00	1.00			1.00
	Actual		1.04	1.06		1.06	3.07		2.00		2.00		0.97	2.01	1.60	0.94			0.95
24 of 106	Expected		1.00	2.00		1.00	4.00		2.00	1.00	1.00			1.00	1.00			1.00	2.00
	Actual		1.00	1.92		1.08	4.00		1.83	1.10	1.05			0.99	0.80			0.96	1.89
25 of 106	Expected		1.00	1.00		1.00	4.00		1.00	1.00	1.00					2.00		1.00	3.00
	Actual		0.95	1.00		1.00	3.89		0.87	1.03	0.95					1.90		1.03	2.72

Table 2 - Amino Acid Analysis

Peptide		Ala (A)	Arg (R)	Asx (N,D)	Cys (C)	Glx (Q,E)	Gly (G)	His (H)	Ile (I)	Leu (L)	Lys (K)	Met (M)	Phe (F)	Pro (P)	Ser (S)	Thr (T)	Trp (W)	Tyr (Y)	Val (V)
26 of 106	Expected			1.00			4.00			1.00					1.00	3.00		2.00	4.00
	Actual			1.04			4.00			1.01					0.82	2.89		2.09	3.76
27 of 106	Expected	3.00		1.00		1.00	2.00		1.00						2.00	3.00		1.00	3.00
	Actual	3.18		0.83		1.00	1.75		1.08						1.63	2.39		0.85	2.67
28 of 106	Expected	4.00				3.00	2.00		1.00		1.00				3.00	1.00		1.00	1.00
	Actual	4.35				3.21	2.00		1.01		1.08				2.41	0.82		0.83	1.08
29 of 106	Expected	4.00				5.00	1.00		2.00	1.00	1.00			2.00	1.00				
	Actual	4.03				4.98	1.00		1.99	1.05	1.02			1.97	0.84				
30 of 106	Expected	1.00	1.00	1.00		5.00	1.00		1.00	1.00	1.00		1.00	2.00	1.00				1.00
	Actual	1.00	1.03	1.05		4.96	1.03		1.03	1.05	1.04		0.97	2.18	0.91				1.14
31 of 106	Expected		2.00	2.00		3.00			2.00	2.00	1.00	1.00	1.00	1.00		1.00			1.00
	Actual		1.94	1.99		3.00			1.93	2.08	0.96	1.01	0.97	0.93		0.92			0.96
32 of 106	Expected		2.00	3.00		1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00		1.00			1.00
	Actual		1.95	3.00		1.02	1.00	0.99	0.98	2.11	0.97	0.99	0.98	1.01		0.96			0.97
33 of 106	Expected		3.00	2.00			2.00	1.00	1.00	2.00	1.00	1.00		1.00	1.00	2.00			
	Actual		2.97	2.05			2.00	1.01	1.00	2.13	0.99	1.01		1.06	0.80	1.88			
34 of 106	Expected	1.00	2.00	1.00			2.00	1.00	1.00	2.00	1.00			2.00	1.00	1.00		1.00	1.00
	Actual	1.00	2.25	1.07			2.19	1.07	1.01	2.22	1.11			2.22	0.93	1.17		1.02	1.12
35 of 106	Expected	2.00	5.00			1.00	1.00		2.00	1.00	1.00			1.00		1.00		1.00	1.00
	Actual	2.00	5.00			1.05	1.00		1.89	1.04	0.98			0.99		0.95		1.05	0.94
36 of 106	Expected	2.00	4.00	1.00		1.00			3.00	2.00				1.00		1.00			2.00
	Actual	1.88	3.68	0.96		1.00			2.64	1.97				0.95		0.89			1.97
37 of 106	Expected	2.00	5.00	1.00		1.00			2.00	2.00				1.00		2.00			1.00
	Actual	2.04	4.94	1.02		1.00			1.92	2.21				1.06		1.94			0.99
38 of 106	Expected	2.00	2.00	1.00		1.00			1.00	2.00		1.00		1.00	1.00	2.00			3.00
	Actual	2.18	2.11	1.08		1.12			1.02	2.27		1.06		1.10	0.82	1.99			3.00
39 of 106	Expected	4.00	1.00			2.00	1.00			2.00	1.00	1.00		1.00	1.00	1.00			2.00
	Actual	4.12	0.97			2.05	1.00			2.01	1.04	1.06		0.85	0.80	0.84			1.93
40 of 106	Expected	3.00	1.00			3.00	1.00		1.00	1.00	1.00	2.00		1.00	1.00			1.00	1.00
	Actual	3.00	1.04			2.88	1.02		1.01	1.04	1.03	2.10		1.03	0.85			0.96	1.03
41 of 106	Expected	3.00	1.00			2.00	1.00		1.00	1.00	2.00	1.00		1.00		2.00		1.00	1.00
	Actual	2.87	0.96			2.00	0.96		0.92	0.99	1.89	0.96		0.95		1.81		1.02	0.96
42 of 106	Expected	1.00	1.00			2.00	1.00	1.00	1.00		2.00	1.00		1.00	1.00	3.00		1.00	1.00
	Actual	1.00	0.92			1.95	0.97	0.98	0.91		1.96	0.98		0.85	0.91	2.48		0.89	1.03
43 of 106	Expected	1.00		1.00		2.00	1.00	1.00	1.00	1.00	2.00	1.00			1.00	3.00			2.00
	Actual	1.06		1.16		2.25	1.12	1.09	0.92	1.19	2.13	1.09			0.83	3.00			1.91
44 of 106	Expected	1.00		1.00	1.00	2.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00		1.00	2.00			1.00
	Actual	1.03		1.00	0.00 ^b	1.93	0.94	2.00	0.80	1.00	1.00	1.03	0.91		0.80	1.88			0.86
45 of 106	Expected	1.00	1.00	1.00	1.00	1.00		1.00	1.00	3.00	1.00	2.00	1.00			2.00			1.00
	Actual	1.06	1.06	0.97	0.00 ^b	1.00		1.03	0.68 ^c	3.21	1.01	2.04	0.98			1.79			0.68 ^c
46 of 106	Expected	1.00	2.00		1.00			1.00		2.00		2.00	1.00	1.00	1.00	2.00			2.00
	Actual	0.99	2.00		0.06 ^b			1.00		2.13		1.97	1.00	0.98	0.84	1.94			1.99
47 of 106	Expected		2.00	2.00					1.00	2.00		2.00	1.00	2.00	1.00	1.00		1.00	2.00
	Actual		1.96	2.08					1.01	2.04		2.00	0.96	2.06	0.81	0.93		1.04	1.96
48 of 106	Expected	1.00	1.00	3.00		1.00		1.00	2.00			2.00		2.00	1.00			1.00	2.00
	Actual	0.96	0.92	2.89		1.00		0.96	1.55 ^c			1.98		2.04	0.84			0.85	2.03
49 of 106	Expected	2.00		4.00		1.00		1.00	2.00			2.00	1.00	1.00		1.00		1.00	
	Actual	1.87		3.83		1.00		0.99	1.67			1.99	1.00	0.90		0.97		0.99	
50 of 106	Expected	3.00	2.00	2.00		1.00	1.00	1.00	2.00			1.00	1.00	1.00	1.00	1.00			
	Actual	3.00	1.98	1.86		0.94	0.96	0.98	1.93			1.01	0.87	1.00	0.91	0.89			

Table 2 - Amino Acid Analysis

Peptide		Ala (A)	Arg (R)	Asx (N,D)	Cys (C)	Glx (Q,E)	Gly (G)	His (H)	Ile (I)	Leu (L)	Lys (K)	Met (M)	Phe (F)	Pro (P)	Ser (S)	Thr (T)	Trp (W)	Tyr (Y)	Val (V)
51 of 106	Expected	2.00	3.00	1.00			1.00		2.00				1.00	1.00	2.00	2.00		1.00	1.00
	Actual	2.06	3.05	1.04			1.00		1.98				0.90	0.95	1.65	1.78		0.90	1.08
52 of 106	Expected	3.00	3.00			1.00	3.00		2.00			1.00			1.00	1.00		1.00	1.00
	Actual	3.00	3.13			1.17	3.26		2.06			1.04			0.82	1.04		1.09	1.10
53 of 106	Expected	4.00	1.00			1.00	2.00		2.00			2.00	1.00		1.00	2.00			1.00
	Actual	4.51	0.96			1.00	2.10		2.01			2.26	1.02		0.85	1.74			1.06
54 of 106	Expected	4.00				1.00	2.00		1.00			2.00	1.00	2.00	1.00	2.00			1.00
	Actual	3.96				1.01	2.00		1.01			1.98	1.04	2.10	0.80	1.97			1.03
55 of 106	Expected	2.00				2.00	1.00		1.00			1.00	2.00	3.00	1.00	2.00			1.00
	Actual	1.99				1.98	1.18		0.94			0.94	2.00	3.34	0.88	1.75			1.17
56 of 106	Expected	2.00		1.00		3.00	1.00		1.00				1.00	3.00	2.00	1.00			2.00
	Actual	2.12		1.10		3.25	1.00		0.92				1.05	3.01	1.68	0.93			1.96
57 of 106	Expected	2.00	1.00	3.00		5.00			1.00				1.00	1.00	1.00				2.00
	Actual	2.00	0.91	2.87		4.76			0.81				1.02	0.98	0.97				1.98
58 of 106	Expected	1.00	2.00	3.00		4.00			2.00					1.00	2.00		1.00		1.00
	Actual	1.00	2.20	3.23		4.44			1.95					1.08	1.70		0.00 ^a		0.89
59 of 106	Expected		2.00	3.00		4.00	1.00		1.00					1.00	2.00		2.00	1.00	
	Actual		2.11	3.18		4.00	1.13		1.01					1.11	1.72		0.00 ^a	0.97	
60 of 106	Expected		1.00	2.00		2.00	2.00		1.00				1.00	2.00	2.00	1.00	2.00	1.00	
	Actual		1.05	2.17		2.05	2.15		1.05				1.08	2.09	1.61	1.00	0.00 ^a	1.11	
61 of 106	Expected			1.00		1.00	2.00		1.00		1.00		2.00	1.00	1.00	2.00	2.00	1.00	2.00
	Actual			1.00		0.91	2.05		0.95		1.05		1.86	1.05	1.01	1.92	0.00 ^a	0.92	2.24
62 of 106	Expected			1.00			2.00		1.00		2.00		2.00	2.00	2.00	2.00	1.00		2.00
	Actual			1.10			2.15		1.06		2.11		2.13	2.22	1.62	2.00	0.00 ^a		2.10
63 of 106	Expected	1.00		3.00			1.00		2.00		1.00		1.00	1.00	2.00	1.00	1.00		2.00
	Actual	0.94		2.99			1.00		1.91		0.98		1.01	1.06	1.60	0.95	0.00 ^a		1.96
64 of 106	Expected	1.00	1.00	4.00	1.00		2.00		2.00	1.00	2.00			1.00	2.00				
	Actual	1.04	1.01	4.00	0.00 ^b		2.06		1.98	1.03	2.04			0.94	1.63				
65 of 106	Expected	1.00	2.00	4.00	1.00	1.00	1.00		2.00	2.00	2.00								1.00
	Actual	0.90	1.84	3.68	0.05 ^b	1.00	0.93		1.70	1.96	1.81								0.88
66 of 106	Expected		3.00	2.00		1.00	1.00		1.00	2.00	3.00		1.00		1.00	1.00			1.00
	Actual		2.99	1.97		0.97	1.00		0.83	1.99	3.02		0.92		0.84	1.08			0.93
67 of 106	Expected		2.00	1.00		3.00			1.00	1.00	2.00		1.00		1.00	3.00		1.00	1.00
	Actual		1.89	1.00		2.94			0.80	0.98	2.05		0.88		0.80	2.93		0.95	0.90
68 of 106	Expected		1.00	5.00		2.00					3.00		1.00			3.00	1.00	1.00	
	Actual		0.93	4.17		2.00					2.82		0.94			2.77	0.00 ^a	0.98	
69 of 106	Expected			4.00		2.00					2.00					4.00	1.00	2.00	2.00
	Actual			3.33		2.13					2.00					3.96	0.00 ^a	2.16	1.98
70 of 106	Expected			5.00		1.00	1.00		1.00		1.00	1.00			1.00	2.00	1.00	1.00	2.00
	Actual			5.00		1.05	1.10		1.06		1.08	1.14			0.81	1.91	0.00 ^a	1.00	2.23
71 of 106	Expected	2.00	1.00	3.00		1.00	1.00		1.00			1.00	1.00		1.00	2.00		1.00	2.00
	Actual	2.03	0.98	3.00		0.97	1.02		0.95			1.05	0.94		0.83	1.64		0.85	1.93
72 of 106	Expected	2.00	3.00	3.00		1.00	1.00		2.00			1.00	1.00	1.00	1.00				1.00
	Actual	2.00	3.14	3.45		1.20	1.10		1.96			0.94	0.85	1.08	0.88				0.94
73 of 106	Expected	1.00	4.00	3.00	1.00				1.00	1.00	1.00		1.00	2.00					2.00
	Actual	0.97	3.97	3.00	0.05 ^b				0.84	1.07	0.99		0.99	2.00					1.85
74 of 106	Expected		2.00	2.00	1.00		1.00		2.00	2.00	2.00			2.00					2.00
	Actual		1.99	2.04	0.02 ^b		1.00		1.77	2.14	1.98			2.02					1.83
75 of 106	Expected		2.00	1.00	1.00	1.00	1.00		2.00	3.00	2.00			2.00					2.00
	Actual		1.98	0.98	0.03 ^b	1.00	1.01		1.70	3.09	1.92			2.02					1.82

Table 2 - Amino Acid Analysis

Peptide		Ala (A)	Arg (R)	Asx (N,D)	Cys (C)	Glx (Q,E)	Gly (G)	His (H)	Ile (I)	Leu (L)	Lys (K)	Met (M)	Phe (F)	Pro (P)	Ser (S)	Thr (T)	Trp (W)	Tyr (Y)	Val (V)	
76 of 106	Expected	1.00	1.00	1.00		1.00	2.00		2.00	2.00	1.00	1.00		3.00					2.00	
	Actual	0.98	0.98	0.94		1.00	1.96		1.74	2.02	0.91	0.99		3.04					1.84	
77 of 106	Expected	3.00	1.00			1.00	1.00		1.00	1.00		1.00		3.00	1.00	1.00			3.00	
	Actual	3.00	0.97			1.01	1.00		0.82	1.00		0.99		3.19	0.82	0.88			3.13	
78 of 106	Expected	4.00	3.00			1.00	2.00					1.00		2.00	1.00	1.00			2.00	
	Actual	3.88	2.79			1.00	1.89					0.97		1.99	0.81	0.94			1.95	
79 of 106	Expected	3.00	4.00	2.00		2.00	2.00		1.00						1.00	1.00			1.00	
	Actual	2.92	4.00	2.11		2.13	2.06		1.03						0.81	0.93			0.95	
80 of 106	Expected	1.00	4.00	3.00		4.00	3.00		1.00		1.00									
	Actual	0.93	3.69	2.89		4.00	2.81		0.91		0.94									
81 of 106	Expected		1.00	3.00		4.00	3.00		1.00		1.00	1.00							2.00	1.00
	Actual		0.92	2.86		4.00	2.83		0.88		0.93	0.95							2.04	0.96
82 of 106	Expected			4.00		4.00	2.00			1.00	1.00	1.00		1.00					2.00	1.00
	Actual			3.93		3.95	2.00			1.04	1.00	1.00		0.93					2.03	0.97
83 of 106	Expected	1.00		4.00		2.00	1.00	2.00		1.00		1.00		1.00		1.00	1.00	1.00	1.00	1.00
	Actual	1.02		3.99		2.00	0.91	2.03		1.02		0.91		0.94		1.04	0.00 ^a	0.95	0.90	0.90
84 of 106	Expected	2.00		4.00		2.00		2.00		3.00	1.00	1.00				1.00	1.00			
	Actual	1.79		3.88		2.00		1.89		3.03	0.92	0.94				0.93	0.00 ^a			
85 of 106	Expected	2.00		3.00		1.00		2.00	1.00	2.00	1.00	1.00				2.00	1.00			
	Actual	1.89		3.25		1.00		1.86	1.03	2.18	0.98	1.02				1.95	0.00 ^a			
86 of 106	Expected	1.00		3.00		2.00	1.00		3.00	2.00	1.00	1.00		1.00		2.00				
	Actual	0.98		2.96		2.00	1.02		2.49	2.05	0.96	0.97		0.98		1.74				
87 of 106	Expected	1.00		3.00		2.00	1.00		3.00	2.00			1.00	2.00		1.00				
	Actual	1.00		2.85		1.99	1.00		2.46	2.03			0.99	1.95		0.85				
88 of 106	Expected	1.00	1.00			4.00	1.00		2.00	1.00	1.00		1.00	3.00		1.00				
	Actual	1.00	1.00			4.14	1.01		1.60	1.14	0.98		1.02	2.91		0.96				
89 of 106	Expected	3.00	1.00	1.00		3.00	1.00		2.00	1.00	1.00		1.00	2.00	1.00					
	Actual	3.08	1.02	1.03		3.00	0.97		1.97	1.04	1.01		0.92	2.12	0.81					
90 of 106	Expected	2.00	3.00	1.00		3.00	2.00		1.00	1.00	1.00			1.00	1.00				1.00	
	Actual	2.00	3.08	1.05		3.16	2.08		0.99	1.09	0.99			0.95	0.80				1.09	
91 of 106	Expected	3.00	3.00	1.00		2.00	2.00		1.00	1.00	1.00		1.00			1.00			1.00	
	Actual	2.76	2.83	0.91		2.00	2.00		0.88	0.97	0.97		0.97			0.95			0.95	
92 of 106	Expected	1.00	5.00			2.00	1.00			2.00	1.00	1.00	1.00			1.00			1.00	1.00
	Actual	0.93	4.63			2.00	0.91			1.94	0.94	0.99	0.95			0.92			0.86	0.97
93 of 106	Expected	1.00	3.00	1.00		1.00	1.00			2.00	1.00	1.00	1.00	1.00		1.00	1.00			2.00
	Actual	0.93	2.86	0.99		1.00	0.97			2.06	0.94	0.96	0.96	0.99		0.91	0.00 ^a			1.90
94 of 106	Expected		2.00	1.00		1.00	1.00			3.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	3.00
	Actual		2.17	1.00		0.98	1.04			3.08	1.04	1.03		1.05	0.86		0.00 ^a	0.97	3.29	
95 of 106	Expected	1.00		1.00		2.00	2.00			2.00	1.00		1.00	1.00	2.00		1.00	1.00	2.00	
	Actual	1.11		1.10		2.18	2.21			2.17	1.10		1.00	0.94	1.61		0.00 ^a	1.00	2.32	
96 of 106	Expected	1.00	2.00	1.00		2.00	1.00			1.00	1.00		1.00		3.00		1.00	2.00	1.00	
	Actual	1.08	2.30	1.16		2.11	1.11			1.05	1.06		1.04		2.57		0.00 ^a	2.00	1.13	
97 of 106	Expected		3.00	2.00	1.00	3.00	2.00						2.00		2.00		1.00	1.00		
	Actual		3.42	2.19	0.00 ^b	3.29	2.23						2.00		1.74		0.00 ^a	1.00		
98 of 106	Expected		3.00	4.00	1.00	3.00	1.00			1.00			1.00		1.00		1.00		1.00	1.00
	Actual		3.05	4.09	0.02 ^b	3.11	1.03			1.07			1.05		0.81		0.00 ^a		1.00	
99 of 106	Expected		1.00	5.00		5.00	1.00			1.00		1.00	1.00							2.00
	Actual		0.96	4.96		5.19	1.00			1.05		0.98	0.97							1.93
100 of 106	Expected			3.00		5.00	1.00			1.00	1.00	2.00				1.00	1.00			2.00
	Actual			2.92		5.00	1.07			0.97	1.05	2.07				0.98	0.00 ^a			1.91

Table 2 - Amino Acid Analysis

Peptide		Ala (A)	Arg (R)	Asx (N,D)	Cys (C)	Glx (Q,E)	Gly (G)	His (H)	Ile (I)	Leu (L)	Lys (K)	Met (M)	Phe (F)	Pro (P)	Ser (S)	Thr (T)	Trp (W)	Tyr (Y)	Val (V)
101 of 106	Expected		2.00	2.00		3.00	1.00			1.00	3.00	2.00				1.00	1.00		1.00
	Actual		1.88	1.84		3.00	0.97			1.02	2.79	1.85				0.88	0.00 ^a		0.91
102 of 106	Expected	1.00	3.00	1.00		2.00	1.00			2.00	3.00			1.00		1.00	2.00		
	Actual	0.97	2.89	0.98		2.00	1.00			2.09	2.85			0.99		0.85	0.00 ^a		
103 of 106	Expected	1.00	4.00	2.00						2.00	2.00			1.00	1.00	1.00	1.00	1.00	
	Actual	1.04	4.11	2.04						2.18	2.03			1.07	0.80	1.00	0.00 ^a	1.10	
104 of 106	Expected	2.00	3.00	2.00		1.00				3.00				2.00	1.00	1.00	1.00	1.00	
	Actual	2.12	3.29	2.12		1.12				3.21				2.19	0.84	0.97	0.00 ^a	1.00	
105 of 106	Expected	3.00	2.00	1.00		2.00				2.00	1.00		2.00	1.00	1.00	1.00			1.00
	Actual	2.94	2.00	1.00		2.04				2.01	1.03		1.84	0.92	0.87	0.91			0.89
106 of 106	Expected	3.00	3.00			2.00	1.00			2.00	1.00		2.00						
	Actual	2.96	2.92			2.00	0.98			2.04	0.98		2.00						

^aTrp was completely destroyed during hydrolysis

^bCys was completely destroyed during hydrolysis

^cIle-Ile, Val-Ile, Val-Val, and/or Ile-Val bonds were only partially hydrolyzed during hydrolysis

Date: 30 APR 2007

Signature: Signature on File

Title: Technical Manager, BEI Authentication or designee

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