

Peptide Array, Hepatitis C Virus, H77, NS3 Protein

Catalog No. NR-3752

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Product Description: The 98-peptide array spans the NS3 protein of hepatitis C virus, H77 (genotype 1a; GenPept: AAB67036). Peptides are 15- to 19-mers, with 11 or 12 amino acid overlaps.

Lot: N671-1 to N671-98

The following information applies to all peptides:

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

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

Table 1							
Peptide	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Hydrophilicity	Purity by HPLC ^a	Peptide Content ^b
1 of 98	7/27/2006	18	1 APITAYAQQTRGLLGCI 18	1889.26	0.69	97.4%	89.2%
2 of 98	7/27/2006	18	7 AQQTRGLLGCIITSLTGR 24	1888.24	0.26	96.2%	84.7%
3 of 98	7/27/2006	16	14 LGCIITSLTGRDKNQV 29	1718.02	0.09	89.8%	83.4%
4 of 98	7/27/2006	18	19 TSLTGRDKNQVEGEVQIV 36	1973.19	-0.64	95.2%	85.2%
5 of 98	7/27/2006	18	26 KNQVEGEVQIVSTATQTF 43	1979.19	-0.36	81.6%	89.7%
6 of 98	7/27/2006	16	33 VQIVSTATQTFLATCI 48	1696.01	1.22	88.1%	88.2%
7 of 98	7/27/2006	18	38 TATQTFLATCINGVCWTV 55	1929.26	0.91	84.5%	89.4%
8 of 98	7/27/2006	18	45 ATCINGVCWTVYHGAGTR 62	1909.19	0.27	95.4%	84.8%
9 of 98	7/27/2006	17	52 CWTVYHGAGTRTIASPK 68	1848.13	-0.25	99.3%	80.2%
10 of 98	7/27/2006	18	58 GAGTRTIASPKGPVIQMY 75	1847.18	-0.06	99.8%	84.4%
11 of 98	7/27/2006	18	65 ASPKGPVIQMYTNVDQDL 82	1976.25	-0.41	98.1%	89.7%
12 of 98	7/27/2006	16	72 IQMYTNVDQDLVWPA 87	1850.1	-0.12	95.1%	89.0%
13 of 98	7/27/2006	18	77 NVDQDLVWPAQGSRSLS 94	1939.13	-0.59	98.7%	89.5%
14 of 98	7/27/2006	18	84 GWPAPQGSRSLSPTCTCGS 101	1805.04	-0.45	98.1%	88.8%
15 of 98	7/27/2006	17	91 SRSLTPCTCGSSDLYLV 107	1802.07	0.28	97.4%	88.8%
16 of 98	7/27/2006	18	97 CTCGSSDLYLVTRHADVI 114	1953.24	0.44	92.1%	85.1%
17 of 98	7/27/2006	16	104 LYLVRHADVIPVRRR 119	1964.37	-0.11	99.5%	74.2%
18 of 98	7/27/2006	18	109 RHADVIPVRRRGDSRGSLS 126	2047.33	-1.01	94.1%	72.0%
19 of 98	7/27/2006	17	116 VRRRGDSRGSLSRPI 132	1922.24	-0.95	98.3%	73.8%
20 of 98	7/27/2006	15	122 SRGSLSPRPISYLK 136	1673.99	-0.34	98.3%	78.6%
21 of 98	7/27/2006	18	126 LLSPRPISYLKSSGGPL 143	1842.19	0.04	98.7%	84.3%
22 of 98	7/27/2006	18	133 SYLKGSSGGPLCPAGHA 150	1714.98	0.11	98.9%	83.4%
23 of 98	7/27/2006	18	140 GGPLLCPAGHAVGLFRAA 157	1707.05	0.87	98.7%	83.3%
24 of 98	7/27/2006	18	147 AGHAVGLFRAAVCTRGVA 164	1756.08	0.92	98.2%	79.4%
25 of 98	7/27/2006	17	154 FRAAVCTRGVAKAVDFI 170	1824.19	0.88	99.1%	80.0%
26 of 98	7/27/2006	16	160 TRGVAKAVDFIPVENL 175	1729.02	0.36	96.1%	83.5%
27 of 98	7/27/2006	16	165 KAVDFIPVENLGTMMR 180	1791.12	0.06	94.8%	84.0%
28 of 98	7/27/2006	15	170 IPVENLGTMMRSPVF 184	1660.97	0.27	97.7%	87.9%

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Peptide	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Hydrophilicity	Purity by HPLC ^a	Peptide Content ^b
29 of 98	7/27/2006	19	174 NLGTTMRSPVFTDNSSPPA 192	1992.21	-0.54	85.7%	89.7%
30 of 98	7/27/2006	18	182 PVFTDNSSPPAVPQSFQV 199	1917.12	-0.19	99.9%	89.4%
31 of 98	7/27/2006	16	189 SPPAVPQSFQVAHLHA 204	1685.92	0.04	98.4%	83.1%
32 of 98	7/27/2006	17	194 PQSFQVAHLHAPTGS GK 210	1761.97	-0.54	98.6%	79.4%
33 of 98	7/27/2006	18	200 AHLHAPTGS GKSTKVPAA 217	1729.97	-0.33	99.5%	75.2%
34 of 98	7/27/2006	18	207 GSGKSTKVPAAAYAAQGYK 224	1784.02	-0.64	98.5%	79.6%
35 of 98	7/27/2006	15	214 VPAAYAAQGYKVLVL 228	1562.89	1.03	99.9%	87.3%
36 of 98	7/27/2006	17	218 YAAQGYKVLVLNPSVAA 234	1764.07	0.65	98.7%	88.6%
37 of 98	7/27/2006	18	224 KVLVLNPSVAATLGF GAY 241	1820.18	1.09	98.2%	88.9%
38 of 98	7/27/2006	18	231 SVAATLGF GAYMSKAHGV 248	1767.05	0.68	95.4%	83.8%
39 of 98	7/27/2006	16	238 FGAYMSKAHGVDPNIR 253	1763.02	-0.38	98.3%	79.5%
40 of 98	7/27/2006	17	243 SKAHGVDPNIR TGVRTI 259	1821.09	-0.5	99.8%	76.2%
41 of 98	7/27/2006	17	249 DPNIR TGVRTIT TGSPI 265	1798.04	-0.35	99.7%	84.0%
42 of 98	7/27/2006	18	255 GVRTIT TGSPI TYSTY GK 272	1902.15	-0.32	99.5%	84.8%
43 of 98	7/27/2006	18	262 GSPIT YSTY GKFLADGGC 279	1837.05	-0.04	98.2%	89.0%
44 of 98	7/27/2006	18	269 TYGKFLADGGC SGGAYDI 286	1794.97	0.01	93.3%	88.7%
45 of 98	7/27/2006	18	276 DGGC SGGAYDIICDECH 293	1828.0	0.11	84.2%	88.9%
46 of 98	7/27/2006	18	283 AYDIICDECH STDATSI 300	1970.18	0.28	83.3%	89.6%
47 of 98	7/27/2006	18	290 DECH STDATSI LGITVL 307	1832.03	0.38	90.0%	88.9%
48 of 98	7/27/2006	17	297 ATSILGIGT VLDQAETA 313	1659.87	0.71	92.5%	87.9%
49 of 98	7/27/2006	18	303 IGT VLDQAETA GARLVVL 320	1826.14	0.93	90.7%	88.9%
50 of 98	7/27/2006	18	310 AETAGARLVVLATAT PPG 327	1694.96	0.61	90.9%	88.1%
51 of 98	7/27/2006	17	317 LVVLATAT PPGSVTVSH 333	1648.93	1.03	94.6%	87.9%
52 of 98	7/27/2006	18	323 ATPPGSVTVSHPNIEEVA 340	1804.99	-0.07	99.9%	88.8%
53 of 98	7/27/2006	18	330 TVSHPNIEEVALSTTGEI 347	1897.09	0.01	98.0%	89.3%
54 of 98	7/27/2006	18	337 EEVALSTTGEI PFY GKAI 354	1925.18	0.17	99.0%	89.4%
55 of 98	7/27/2006	17	344 TGEI PFY GKAI PLEVIK 360	1875.26	0.31	99.7%	84.6%
56 of 98	7/27/2006	18	350 YGKAI PLEVIK GGRHLIF 367	2011.46	0.38	97.6%	77.9%
57 of 98	7/27/2006	17	357 EVIK GGRHLIFCHSKKK 373	1980.43	-0.55	89.8%	68.5%
58 of 98	7/27/2006	18	363 RHLIFCHSKKKCDELA AK 380	2127.58	-0.6	98.4%	70.0%
59 of 98	7/27/2006	17	370 SKKKCDELA AKLVALGI 386	1787.21	0.25	97.8%	75.8%
60 of 98	7/27/2006	18	376 ELAAKLVALGINAVAY YR 393	1935.31	0.83	99.2%	85.0%
61 of 98	7/27/2006	18	383 ALGINAVAY YRGLDVSVI 400	1894.22	1.05	92.5%	89.3%
62 of 98	7/27/2006	18	390 AYYRGLDVSVI P TSGDVV 407	1911.16	0.45	98.6%	89.3%
63 of 98	7/27/2006	18	397 VSVI P TSGDVV VVSTDAL 414	1758.01	1.25	98.0%	88.5%
64 of 98	7/27/2006	15	404 GDVVV VSTDALMTGF 418	1510.74	1.14	82.7%	86.9%
65 of 98	7/27/2006	18	408 VVSTDALMTGF T GDFDVS 425	1862.06	0.59	91.7%	89.1%
66 of 98	7/27/2006	18	415 MTGFTGDFDVS IDCNTCV 432	1925.16	0.43	80.1%	89.4%
67 of 98	7/27/2006	17	422 FDSVIDCNTCV TQTVD F 438	1907.12	0.43	Crude	89.3%
68 of 98	7/27/2006	17	428 CNTCV TQTVD FSLDPTF 444	1891.12	0.21	84.3%	89.2%
69 of 98	7/27/2006	19	433 TQTVDFSLDPTFTIETT TL 451	2130.35	0.03	87.5%	90.3%
70 of 98	7/27/2006	18	441 DPTFTIETT TL PQDAVSR 458	1992.19	-0.49	98.5%	89.7%
71 of 98	7/27/2006	17	448 TTTLPQDAVSR TQRRGR 464	1943.17	-1.43	89.3%	77.3%
72 of 98	7/27/2006	16	454 DAVSR TQRRGR TGRGK 469	1801.02	-1.92	93.6%	69.3%
73 of 98	7/27/2006	18	459 TQRRGR TGRGKPGIYRFV 476	2105.45	-1.35	97.4%	72.5%
74 of 98	7/27/2006	16	466 GRGKPGIYRFV APGER 481	1760.05	-0.86	98.6%	75.5%

Peptide	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Hydrophilicity	Purity by HPLC ^a	Peptide Content ^b
75 of 98	7/27/2006	16	471 GIYRFVAPGERPSGMF 486	1784.09	-0.06	99.6%	83.9%
76 of 98	7/27/2006	16	476 VAPGERPSGMFDSSVL 491	1648.87	0.05	98.7%	87.9%
77 of 98	7/27/2006	17	481 RPSGMFDSSVLCECYDA 497	1880.12	-0.07	82.9%	89.2%
78 of 98	7/27/2006	18	487 DSSVLCECYDAGCAWYEL 504	2027.25	0.19	99.5%	89.9%
79 of 98	7/27/2006	18	494 CYDAGCAWYELTPAETTV 511	1993.21	0.02	99.5%	89.7%
80 of 98	7/27/2006	17	501 WYELTPAETTVRLRAYM 517	2100.44	-0.35	99.2%	86.0%
81 of 98	7/27/2006	18	507 AETTVRLRAYMNTPLPV 524	1989.34	-0.08	98.7%	85.3%
82 of 98	7/27/2006	18	514 RAYMNTPLPVCQDHLF 531	2091.41	-0.36	98.2%	85.9%
83 of 98	7/27/2006	16	521 GLPVCQDHLFWEWGF 536	1876.14	0.22	99.4%	89.2%
84 of 98	7/27/2006	18	525 CQDHLFWEWGFVFTGLTHI 542	2132.4	0.05	97.9%	86.2%
85 of 98	7/27/2006	16	532 WEGVFTGLTHIDAHFL 547	1843.09	0.45	93.2%	84.4%
86 of 98	7/27/2006	15	537 TGLTHIDAHFLSQT 551	1668.88	-0.26	98.2%	78.5%
87 of 98	7/27/2006	17	541 HIDAHFLSQTQSGENF 557	1959.12	-0.87	94.2%	81.1%
88 of 98	7/27/2006	17	547 LSQTKQSGENFPYLVAY 563	1945.18	-0.49	98.2%	89.5%
89 of 98	7/27/2006	18	553 SGENFPYLVAYQATV 570	1989.25	0.1	95.9%	89.7%
90 of 98	7/27/2006	19	560 LVAYQATV CARAQAPPSW 578	2029.37	0.19	81.1%	89.9%
91 of 98	7/27/2006	18	568 CARAQAPPSWDQMWKCL 585	2088.48	-0.57	99.1%	85.9%
92 of 98	7/27/2006	18	575 PPSWDQMWKCLIRLKP 592	2212.73	-0.39	99.4%	82.9%
93 of 98	7/27/2006	18	582 WKCLIRLKP TLHGPTPL 599	2086.64	0.17	99.5%	78.5%
94 of 98	7/27/2006	17	589 KP TLHGPTPL YRLGAV 605	1833.22	0.08	99.9%	80.1%
95 of 98	7/27/2006	17	595 PTL YRLGAV QNEVTL 611	1884.22	0.24	97.4%	89.2%
96 of 98	7/27/2006	18	601 RLGAVQNEVTL THPITKY 618	2040.37	-0.29	95.0%	81.7%
97 of 98	7/27/2006	18	608 EVTL THPITKYIMTCMSA 625	2039.48	0.44	99.0%	85.6%
98 of 98	7/27/2006	17	615 ITKYIMTCMSADLEVVT 631	1918.34	0.84	Crude	89.4%

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

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 98	Expected	3.00	1.00		1.00	2.00	2.00		3.00	2.00				1.00		2.00		1.00	
	Actual	2.67	1.15		0.47 ^a	1.67	2.15		1.62 ^b	1.76				1.00		1.78		1.09	
2 of 98	Expected	1.00	2.00		1.00	2.00	3.00		2.00	3.00				1.00	3.00				
	Actual	0.99	2.15		0.48 ^a	1.61	3.00		0.92 ^b	2.63				1.19	2.70				
3 of 98	Expected		1.00	2.00	1.00	1.00	2.00		2.00	2.00	1.00			1.00	2.00				1.00
	Actual		1.15	1.57	0.52 ^a	0.85	2.00		0.77 ^b	1.63	0.74			1.02	1.80				0.91
4 of 98	Expected		1.00	2.00		4.00	2.00		1.00	1.00	1.00			1.00	2.00				3.00
	Actual		1.15	1.73		3.52	2.01		0.67 ^b	1.00	0.81			1.07	1.87				1.89 ^b
5 of 98	Expected	1.00		1.00		5.00	1.00		1.00		1.00		1.00	1.00	3.00				3.00
	Actual	0.91		0.74		4.45	1.00		0.55 ^b		0.83		0.97	1.03	2.74				1.64 ^b
6 of 98	Expected	2.00			1.00	2.00			2.00	1.00			1.00	1.00	4.00				2.00
	Actual	2.05			0.52 ^a	1.68			1.11 ^b	1.16			1.00	0.70	3.74				0.83 ^b
7 of 98	Expected	2.00		1.00	2.00	1.00	1.00		1.00	1.00			1.00		5.00	1.00			2.00
	Actual	1.87		0.95	0.90 ^a	1.00	1.13		0.89	1.06			1.01		4.60	0.00 ^c			1.79
8 of 98	Expected	2.00	1.00	1.00	2.00		3.00	1.00	1.00						3.00	1.00	1.00	1.00	2.00
	Actual	1.88	1.00	0.80	0.59 ^a		2.98	1.13	0.80						2.60	0.00 ^c	0.88	1.66	
9 of 98	Expected	2.00	1.00		1.00		2.00	1.00	1.00		1.00		1.00	1.00	3.00	1.00	1.00	1.00	1.00
	Actual	1.89	0.96		0.54 ^a		2.03	1.10	0.84		0.90		1.00	0.98	1.97	0.00 ^c	0.83	0.95	
10 of 98	Expected	2.00	1.00			1.00	3.00		2.00		1.00	1.00		2.00	1.00	2.00		1.00	1.00
	Actual	1.88	1.12			0.78	2.76		1.40 ^b		0.85	0.88		1.96	1.00	1.60		1.00	0.61 ^b

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)
11 of 98	Expected	1.00		3.00		2.00	1.00		1.00	1.00	1.00	1.00		2.00	1.00	1.00		1.00	2.00
	Actual	0.92		2.64		1.59	1.04		0.57 ^b	0.90	0.83	0.92		1.68	0.94	1.00		1.12	1.31 ^b
12 of 98	Expected	1.00		3.00		2.00	1.00		1.00	1.00		1.00		1.00		1.00	1.00	1.00	2.00
	Actual	0.95		2.64		1.50	0.99		0.74	0.94		0.89		1.16		1.00	0.00 ^c	1.17	1.75
13 of 98	Expected	1.00	1.00	3.00		2.00	2.00			2.00				2.00	2.00		1.00		2.00
	Actual	1.01	1.20	2.72		1.75	1.98			1.77				1.95	2.00		0.00 ^c		1.83
14 of 98	Expected	1.00	1.00		2.00	1.00	3.00			1.00				3.00	3.00	2.00	1.00		
	Actual	1.00	1.15		0.92 ^a	1.00	2.80			1.00				2.74	2.68	1.56	0.00 ^c		
15 of 98	Expected		1.00	1.00	2.00		1.00			3.00				1.00	4.00	2.00		1.00	1.00
	Actual		1.00	1.04	0.96 ^a		1.02			2.70				0.80	3.72	1.52		0.82	0.91
16 of 98	Expected	1.00	1.00	2.00	2.00		1.00	1.00	1.00	2.00					2.00	2.00		1.00	2.00
	Actual	1.00	0.78	1.70	0.90 ^a		1.02	1.02	0.68 ^b	1.83					1.83	1.02		0.81	1.34 ^b
17 of 98	Expected	1.00	4.00	1.00				1.00	1.00	2.00				1.00		1.00		1.00	3.00
	Actual	0.93	3.74	0.88				1.12	0.66 ^b	1.76				0.94		1.00		0.99	1.68 ^b
18 of 98	Expected	1.00	5.00	2.00			2.00	1.00	1.00	1.00				1.00	2.00				2.00
	Actual	1.03	4.61	1.91			1.95	1.02	0.56 ^b	1.00				0.98	1.90				1.29 ^b
19 of 98	Expected		5.00	1.00			2.00		1.00	2.00				2.00	3.00				1.00
	Actual		4.58	0.97			2.00		1.00	1.77				1.77	2.62				0.95
20 of 98	Expected		2.00				1.00		1.00	3.00	1.00			2.00	4.00			1.00	
	Actual		2.00				1.03		0.93	2.64	0.81			1.67	3.64			1.03	
21 of 98	Expected		1.00				3.00		1.00	4.00	1.00			3.00	4.00			1.00	
	Actual		1.11				3.02		0.97	3.68	1.00			2.56	3.57			0.94	
22 of 98	Expected	2.00			1.00		4.00	1.00		3.00	1.00			2.00	3.00			1.00	
	Actual	1.68			0.50 ^a		3.68	1.07		2.84	1.00			1.86	2.91			1.25	
23 of 98	Expected	4.00	1.00		1.00		4.00	1.00		3.00			1.00	2.00					1.00
	Actual	3.65	1.02		0.54 ^a		3.64	1.20		2.61			0.89	2.00					1.05
24 of 98	Expected	5.00	2.00		1.00		3.00	1.00		1.00			1.00			1.00			3.00
	Actual	4.62	2.10		0.54 ^a		3.22	1.08		1.00			1.06			0.79			2.76
25 of 98	Expected	4.00	2.00	1.00	1.00		1.00		1.00		1.00		2.00			1.00			3.00
	Actual	3.57	2.00	0.90	0.53 ^a		1.14		0.93		0.90		1.72			0.93			2.66
26 of 98	Expected	2.00	1.00	2.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00			3.00
	Actual	1.88	1.17	1.59		0.79	1.14		0.76	1.02	0.77		1.00	0.96		0.92			2.64
27 of 98	Expected	1.00	1.00	2.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00		2.00			2.00
	Actual	1.00	1.26	1.63		0.82	1.16		0.83	1.06	0.80	1.07	0.96	0.98		1.90			1.66
28 of 98	Expected		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	2.00	1.00	2.00			2.00
	Actual		1.21	0.80		0.77	1.15		0.82	0.97		1.00	0.88	1.73	1.05	1.76			1.73
29 of 98	Expected	1.00	1.00	3.00			1.00			1.00		1.00	1.00	3.00	3.00	3.00			1.00
	Actual	0.90	1.11	2.52			1.09			1.00		0.88	0.89	2.58	2.78	2.71			0.82
30 of 98	Expected	1.00		2.00		2.00								2.00	4.00	3.00	1.00		3.00
	Actual	1.00		1.89		1.63								1.69	3.86	2.91	1.10		2.74
31 of 98	Expected	3.00				2.00		2.00		1.00			1.00	3.00	2.00				2.00
	Actual	2.60				1.83		2.00		0.97			1.09	3.13	2.03				1.95
32 of 98	Expected	2.00				2.00	2.00	2.00		1.00	1.00		1.00	2.00	2.00	1.00			1.00
	Actual	1.62				1.72	1.86	2.07		0.90	1.00		1.08	1.81	1.88	0.93			1.07
33 of 98	Expected	4.00					2.00	2.00		1.00	2.00			2.00	2.00	2.00			1.00
	Actual	3.67					2.25	2.38		1.00	1.92			1.80	2.10	1.65			0.96
34 of 98	Expected	4.00				1.00	3.00				3.00			1.00	2.00	1.00		2.00	1.00
	Actual	3.62				0.84	2.93				2.96			0.94	2.00	0.92		2.06	0.90
35 of 98	Expected	4.00				1.00	1.00			2.00	1.00			1.00				2.00	3.00
	Actual	3.61				1.00	1.13			1.73	0.82			0.98				2.10	2.66
36 of 98	Expected	4.00		1.00		1.00	1.00			2.00	1.00			1.00	1.00			2.00	3.00
	Actual	3.59		0.70		1.00	1.05			1.71	0.90			1.06	0.86			1.78	2.87

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)
37 of 98	Expected	3.00		1.00			2.00			3.00	1.00		1.00	1.00	1.00	1.00		1.00	3.00
	Actual	2.83		0.69			2.08			2.56	1.05		1.06	1.00	0.98	0.83		1.00	2.99
38 of 98	Expected	4.00					3.00	1.00		1.00	1.00	1.00	1.00		2.00	1.00		1.00	2.00
	Actual	3.59					2.68	1.14		0.88	0.71	0.92	1.00		1.63	0.84		1.02	2.01
39 of 98	Expected	2.00	1.00	2.00			2.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	1.00
	Actual	1.68	0.75	1.80			1.91	1.14	0.83		0.85	0.92	0.95	1.00	0.99			1.01	0.89
40 of 98	Expected	1.00	2.00	2.00			2.00	1.00	2.00		1.00			1.00	1.00	2.00			2.00
	Actual	1.00	2.14	1.92			2.07	1.30	1.78		0.92			1.00	0.99	1.70			1.88
41 of 98	Expected		2.00	2.00			2.00		3.00					2.00	1.00	4.00			1.00
	Actual		1.82	1.63			2.24		2.80					2.00	1.07	3.66			0.95
42 of 98	Expected		1.00				3.00		2.00		1.00			1.00	2.00	5.00		2.00	1.00
	Actual		0.80				3.00		1.73		0.95			1.05	2.03	4.47		1.92	1.12
43 of 98	Expected	1.00		1.00	1.00		4.00		1.00	1.00	1.00		1.00	1.00	2.00	2.00		2.00	
	Actual	0.97		0.89	0.47 ^a		3.83		0.90	1.04	0.76		0.97	1.00	1.86	1.66		1.83	
44 of 98	Expected	2.00		2.00	1.00		5.00		1.00	1.00	1.00		1.00		1.00	1.00		2.00	
	Actual	1.82		1.79	0.54 ^a		4.56		0.99	1.12	0.82		1.04		1.13	1.14		2.00	
45 of 98	Expected	1.00		3.00	3.00	1.00	4.00	1.00	3.00						1.00			1.00	
	Actual	1.00		2.55	1.09 ^a	0.89	3.79	1.16	1.05 ^b						1.04			1.22	
46 of 98	Expected	2.00		3.00	2.00	1.00		1.00	4.00						2.00	2.00		1.00	
	Actual	1.92		2.65	0.96 ^a	0.98		1.30	1.88 ^b						2.00	1.74		1.08	
47 of 98	Expected	1.00		2.00	1.00	1.00	2.00	1.00	2.00	2.00					2.00	3.00			1.00
	Actual	1.00		2.05	0.61 ^a	0.81	2.00	0.87	1.68	1.75					1.99	2.67			0.94
48 of 98	Expected	3.00		1.00		2.00	2.00		2.00	2.00					1.00	3.00			1.00
	Actual	2.84		1.00		1.72	2.24		1.82	1.65					0.95	2.71			0.87
49 of 98	Expected	3.00	1.00	1.00		2.00	2.00		1.00	3.00						2.00			3.00
	Actual	2.65	1.15	1.00		1.70	1.97		1.16	2.79						1.69			1.50 ^b
50 of 98	Expected	5.00	1.00			1.00	2.00			2.00				2.00		3.00			2.00
	Actual	4.57	1.07			1.00	1.79			1.89				1.62		2.51			0.99 ^b
51 of 98	Expected	2.00					1.00	1.00		2.00				2.00	2.00	3.00			4.00
	Actual	1.93					1.20	1.17		1.79				1.95	2.00	2.26			2.39 ^b
52 of 98	Expected	2.00		1.00		2.00	1.00	1.00	1.00					3.00	2.00	2.00			3.00
	Actual	1.79		0.99		2.02	1.14	1.27	0.83					3.01	2.00	1.53			2.70
53 of 98	Expected	1.00		1.00		3.00	1.00	1.00	2.00	1.00				1.00	2.00	3.00			2.00
	Actual	0.96		0.87		2.60	1.17	1.21	1.86	1.24				1.06	2.00	2.54			1.73
54 of 98	Expected	2.00				3.00	2.00		2.00	1.00	1.00		1.00	1.00	1.00	2.00		1.00	1.00
	Actual	1.60				2.66	1.95		1.90	0.98	0.94		0.85	0.89	1.00	1.52		0.96	1.00
55 of 98	Expected	1.00				2.00	2.00		3.00	1.00	2.00		1.00	2.00		1.00		1.00	1.00
	Actual	1.00				2.06	1.92		1.36 ^b	0.99	1.79		0.85	1.72		0.81		0.99	0.62 ^b
56 of 98	Expected	1.00	1.00			1.00	3.00	1.00	3.00	2.00	2.00		1.00	1.00				1.00	1.00
	Actual	0.86	1.00			1.12	2.65	1.11	1.42 ^b	1.62	1.74		0.64	0.89				0.94	0.59 ^b
57 of 98	Expected		1.00		1.00	1.00	2.00	2.00	2.00	1.00	4.00		1.00		1.00				1.00
	Actual		0.95		0.51 ^a	0.71	2.00	1.93	1.35 ^b	0.86	3.66		1.00		1.01				0.51 ^b
58 of 98	Expected	2.00	1.00	1.00	2.00	1.00		2.00	1.00	2.00	4.00		1.00		1.00				
	Actual	1.94	1.09	0.93	1.05 ^a	0.89		1.93	0.92	2.00	3.53		0.72		0.92				
59 of 98	Expected	3.00		1.00	1.00	1.00	1.00		1.00	3.00	4.00				1.00				1.00
	Actual	2.82		0.95	0.64 ^a	0.91	1.12		0.93	2.56	3.61				1.09				1.00
60 of 98	Expected	5.00	1.00	1.00		1.00	1.00		1.00	3.00	1.00							2.00	2.00
	Actual	4.55	1.08	0.77		0.87	1.22		0.78	2.93	1.00							1.90	1.92
61 of 98	Expected	3.00	1.00	2.00			2.00		2.00	2.00					1.00			2.00	3.00
	Actual	2.60	1.05	2.00			2.14		1.27 ^b	2.00					1.03			1.78	2.17 ^b
62 of 98	Expected	1.00	1.00	2.00			2.00		1.00	1.00				1.00	2.00	1.00		2.00	4.00
	Actual	0.87	0.97	1.85			1.94		0.64 ^b	0.99				1.00	1.90	0.97		1.83	1.80 ^b
63 of 98	Expected	1.00		2.00			1.00		1.00	1.00				1.00	3.00	2.00			6.00
	Actual	0.95		1.72			1.14		0.63 ^b	1.05				1.00	2.80	1.72			2.29 ^b
64 of 98	Expected	1.00		2.00			2.00			1.00		1.00	1.00		1.00	2.00			4.00
	Actual	1.05		2.00			1.98			1.06		0.87	0.99		1.09	1.79			2.00 ^b

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)
65 of 98	Expected	1.00		3.00			2.00			1.00		1.00	2.00		2.00	3.00			3.00
	Actual	0.98		2.64			2.11			1.00		0.79	1.60		2.00	2.51			1.40 ^b
66 of 98	Expected			4.00	2.00		2.00		1.00			1.00	2.00		1.00	3.00			2.00
	Actual			3.77	0.92 ^a		2.00		0.70 ^b			0.86	2.15		1.13	2.52			1.34 ^b
67 of 98	Expected			4.00	2.00	1.00			1.00				2.00		1.00	3.00			3.00
	Actual			4.00	0.92 ^a	1.00			0.68 ^b				1.92		1.06	2.64			2.15 ^b
68 of 98	Expected			3.00	2.00	1.00				1.00			2.00	1.00	1.00	4.00			2.00
	Actual			2.56	0.99 ^a	0.89				1.03			1.73	0.97	1.00	3.56			1.96
69 of 98	Expected			2.00		2.00			1.00	2.00			2.00	1.00	1.00	7.00			1.00
	Actual			2.00		1.72			0.87	1.85			1.61	1.07	1.00	6.68			0.89
70 of 98	Expected	1.00	1.00	2.00		2.00			1.00	1.00			1.00	2.00	1.00	5.00			1.00
	Actual	0.97	1.00	1.68		1.75			0.96	1.00			0.87	1.90	0.98	4.64			1.00
71 of 98	Expected	1.00	4.00	1.00		2.00	1.00			1.00				1.00	1.00	4.00			1.00
	Actual	1.16	3.81	0.82		1.61	1.01			0.75				1.00	0.88	3.64			0.87
72 of 98	Expected	1.00	5.00	1.00		1.00	3.00				1.00				1.00	2.00			1.00
	Actual	0.98	4.56	0.88		0.84	3.06				0.78				1.07	1.88			1.00
73 of 98	Expected		5.00			1.00	4.00		1.00		1.00		1.00	1.00		2.00		1.00	1.00
	Actual		4.62			0.94	4.00		0.82		0.92		0.89	1.08		1.94		0.91	0.95
74 of 98	Expected	1.00	3.00			1.00	4.00		1.00		1.00		1.00	2.00				1.00	1.00
	Actual	0.90	3.00			0.92	4.08		0.81		0.91		1.03	1.99				0.90	0.98
75 of 98	Expected	1.00	2.00			1.00	3.00		1.00			1.00	2.00	2.00	1.00			1.00	1.00
	Actual	0.87	2.14			0.93	3.00		0.78			0.97	1.73	1.91	1.01			1.08	0.89
76 of 98	Expected	1.00	1.00	1.00		1.00	2.00			1.00		1.00	1.00	2.00	3.00				2.00
	Actual	0.81	1.02	0.92		0.74	2.00			0.80		0.77	0.96	1.84	2.98				1.76
77 of 98	Expected	1.00	1.00	2.00	2.00	1.00	1.00			1.00		1.00	1.00	1.00	3.00			1.00	1.00
	Actual	0.80	1.00	1.71	0.89 ^a	0.94	0.99			0.77		1.02	0.96	0.97	2.88			1.00	0.78
78 of 98	Expected	2.00		2.00	3.00	2.00	1.00			2.00					2.00		1.00	2.00	1.00
	Actual	2.14		2.00	1.66 ^a	1.92	1.20			1.71					1.60		0.00 ^c	1.86	0.76
79 of 98	Expected	3.00		1.00	2.00	2.00	1.00			1.00				1.00		3.00	1.00	2.00	1.00
	Actual	2.88		0.91	1.20 ^a	1.69	1.10			1.00				0.85		2.86	0.00 ^c	2.20	0.82
80 of 98	Expected	2.00	2.00			2.00				2.00		1.00		1.00		3.00	1.00	2.00	1.00
	Actual	1.89	2.11			1.84				1.96		0.98		1.00		2.58	0.00 ^c	2.03	1.15
81 of 98	Expected	2.00	2.00	1.00		1.00	1.00			2.00		1.00		2.00		3.00		1.00	2.00
	Actual	1.81	1.71	0.97		0.95	1.28			1.87		1.13		1.92		2.77		1.15	2.00
82 of 98	Expected	1.00	1.00	2.00	1.00	2.00	1.00	1.00		2.00		1.00	1.00	2.00		1.00		1.00	1.00
	Actual	0.84	0.99	1.88	0.55 ^a	1.63	1.17	0.94		1.58		1.00	0.90	1.58		0.80		1.03	0.85
83 of 98	Expected			1.00	1.00	3.00	2.00	1.00		2.00			2.00	1.00			1.00		2.00
	Actual			1.08	0.52 ^a	2.63	2.06	1.00		1.63			1.05	0.91			0.00 ^c		1.74
84 of 98	Expected			1.00	1.00	3.00	2.00	2.00	1.00	2.00			2.00			2.00	1.00		1.00
	Actual			1.00	0.49 ^a	2.86	2.38	1.98	1.08	2.03			1.63			1.64	0.00 ^c		0.87
85 of 98	Expected	1.00		1.00		1.00	2.00	2.00	1.00	2.00			2.00			2.00	1.00		1.00
	Actual	1.00		0.94		1.05	2.19	2.28	0.91	1.96			1.53			1.59	0.00 ^c		0.92
86 of 98	Expected	1.00		1.00		1.00	1.00	2.00	1.00	2.00	1.00		1.00		1.00	3.00			
	Actual	1.13		0.95		0.99	1.22	1.95	0.95	2.00	0.88		0.96		1.06	2.51			
87 of 98	Expected	1.00		2.00		3.00	1.00	2.00	1.00	1.00			2.00		2.00	1.00			
	Actual	0.90		1.68		2.59	1.03	1.83	0.91	1.08			1.63		2.00	0.86			
88 of 98	Expected	1.00		1.00		3.00	1.00			2.00	1.00		1.00	1.00	2.00	1.00		2.00	1.00
	Actual	0.80		0.93		2.56	1.21			1.66	0.93		0.89	1.00	2.16	0.83		1.84	0.77
89 of 98	Expected	3.00	1.00	1.00	1.00	2.00	1.00			1.00			1.00	1.00	1.00	1.00		2.00	2.00
	Actual	2.70	0.93	0.97	0.59 ^a	1.77	0.94			0.92			0.88	1.05	1.01	0.71		2.00	1.72
90 of 98	Expected	5.00	1.00		1.00	2.00				1.00				3.00	1.00	1.00	1.00	1.00	2.00
	Actual	4.69	1.00		0.56 ^a	1.81				1.02				2.87	1.20	0.83	0.00 ^c	0.90	1.79

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)
91 of 98	Expected	3.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00		3.00	1.00		2.00		
	Actual	2.77	1.03	0.82	1.05 ^a	1.58				1.00	1.02	1.07		2.61	1.05		0.00 ^c		
92 of 98	Expected		1.00	1.00	1.00	1.00			1.00	3.00	2.00	1.00		3.00	1.00	1.00	2.00		
	Actual		0.78	0.94	0.57 ^a	0.83			1.00	3.15	1.93	1.07		2.80	1.06	0.79	0.00 ^c		
93 of 98	Expected		1.00		1.00		1.00	1.00	1.00	5.00	2.00			3.00		2.00	1.00		
	Actual		0.88		0.52 ^a		1.00	1.04	0.83	4.71	1.69			2.65		1.62	0.00 ^c		
94 of 98	Expected	1.00	1.00				2.00	1.00		4.00	1.00			3.00		2.00		1.00	1.00
	Actual	1.00	1.03				1.86	1.12		3.66	0.97			3.06		1.56		1.00	0.98
95 of 98	Expected	1.00	1.00	1.00		2.00	1.00			4.00				2.00		2.00		1.00	2.00
	Actual	1.00	1.01	0.73		1.96	1.06			3.80				1.89		1.57		1.01	1.69
96 of 98	Expected	1.00	1.00	1.00		2.00	1.00	1.00	1.00	2.00	1.00			1.00		3.00		1.00	2.00
	Actual	0.89	1.01	0.73		1.98	1.01	1.12	0.89	1.81	0.96			1.00		2.80		1.02	1.83
97 of 98	Expected	1.00			1.00	1.00		1.00	2.00	1.00	1.00	2.00		1.00	1.00	4.00		1.00	1.00
	Actual	1.00			0.58 ^a	0.75		0.86	1.99	1.00	0.96	1.74		1.02	0.88	3.83		0.92	0.84
98 of 98	Expected	1.00		1.00	1.00	1.00			2.00	1.00	1.00	2.00			1.00	3.00		1.00	2.00
	Actual	1.00		1.19	0.50 ^a	1.04			1.84	0.99	0.71	1.62			0.89	1.99		0.81	0.96 ^b

^aCys was partially destroyed during hydrolysis

^bVal-Ile, Val-Val, Ile-Ile and/or Ile-Val bonds were only partially destroyed during hydrolysis

^cTrp was completely destroyed during hydrolysis

Date: 27 APR 2011

Signature: *Dorothy C. Young*

Title: Technical Manager, BEI Authentication or designee

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