

Peptide Array, Hepatitis C Virus, J4, NS5B Protein

Catalog No. NR-3746

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Product Description: The 90-peptide array spans the NS5B protein of hepatitis C virus, J4 (genotype 1b; GenPept: ACC15722). Peptides are 14- to 19-mers, with 11 amino acid overlaps.

Lot: T5255-1 to T5255-90

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 90	4/14/2011	16	1 SMSYTWGTGALITPCAA 16	1672.95	0.64	96.4%	88.0%
2 of 90	4/14/2011	18	6 WTGALITPCAAEESKLPI 23	1900.24	0.38	95.0%	88.3%
3 of 90	4/14/2011	18	13 PCAAEESKLPIPLSNL 30	1883.17	-0.17	80.1%	89.2%
4 of 90	4/14/2011	18	20 KLPINPLSNLLRHNMV 37	2083.51	-0.24	90.7%	77.8%
5 of 90	4/14/2011	17	27 SNLLRHNMVYATTSR 43	1987.24	-0.71	80.8%	77.6%
6 of 90	4/14/2011	18	33 HHNMVYATTSRSASLRQK 50	2087.37	-0.99	90.2%	75.3%
7 of 90	4/14/2011	18	40 TTSRSASLRQKQVTFDRL 57	2094.42	-0.91	82.6%	75.2%
8 of 90	4/14/2011	18	47 LRQKQVTFDRLQVLDLDDHY 64	2274.63	-0.94	85.1%	76.5%
9 of 90	4/14/2011	18	54 FDRLQVLDLDDHYRDVLKEM 71	2292.62	-0.77	94.8%	80.1%
10 of 90	4/14/2011	18	61 DDHYRDVLKEMKAKASTV 78	2106.40	-1.03	95.3%	75.7%
11 of 90	4/14/2011	18	68 LKEMKAKASTVKAKLLSI 85	1959.48	0.12	89.7%	74.0%
12 of 90	4/14/2011	17	75 ASTVKAKLLSIEEACKL 91	1804.20	0.41	91.9%	79.8%
13 of 90	4/14/2011	18	81 KLSIEEACKLTPPHSAK 98	1965.36	-0.3	86.9%	77.6%
14 of 90	4/14/2011	18	88 ACKLTPPHSAKSKFGYGA 105	1863.18	-0.44	88.2%	76.6%
15 of 90	4/14/2011	17	95 HSAKSKFGYGAKDVRNL 111	1878.14	-0.92	99.7%	73.3%
16 of 90	4/14/2011	18	101 FGYGAKDVRNLSSRAVNH 118	1991.21	-0.65	93.7%	77.8%
17 of 90	4/14/2011	16	108 VRNLSSRAVNHRSVW 123	1894.19	-0.27	88.1%	76.9%
18 of 90	4/14/2011	15	113 SRAVNHRSVWEDLL 127	1795.05	-0.19	82.1%	79.5%
19 of 90	4/14/2011	18	117 NHRVSVWEDLLEDTETPI 134	2167.38	-0.7	81.2%	86.4%
20 of 90	4/14/2011	18	124 EDLLEDTETPIDTTIMAK 141	2035.27	-0.5	95.2%	89.5%
21 of 90	4/14/2011	17	131 ETPIDTTIMAKSEVFCV 147	1884.21	0.44	92.5%	89.2%
22 of 90	4/14/2011	18	137 TIMAKSEVFCVQPEKGGR 154	1980.35	-0.27	85.3%	81.3%
23 of 90	4/14/2011	18	144 VFCVQPEKGGRKPARLIV 161	1997.45	0.01	92.2%	78.8%
24 of 90	4/14/2011	18	151 KGGRKPARLIVFPDLGVR 168	1979.42	-0.23	98.4%	74.3%
25 of 90	4/14/2011	18	158 RLIVFPDLGVRVCEKMAL 175	2059.59	0.87	94.0%	81.9%
26 of 90	4/14/2011	18	165 LGVRVCEKMALYDVVSTL 182	1996.44	0.88	90.1%	85.5%

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Peptide	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Hydrophilicity	Purity by HPLC ^a	Peptide Content ^b
27 of 90	4/14/2011	16	172 KMALYDVVSTLPQAVM 187	1766.17	0.77	92.4%	88.5%
28 of 90	4/14/2011	17	177 DVVSTLPQAVMGSSYGF 193	1758.00	0.54	95.6%	88.5%
29 of 90	4/14/2011	18	183 PQAVMGSSYGFQYSPKQR 200	2031.29	-0.96	93.1%	85.1%
30 of 90	4/14/2011	16	190 SYGFQYSPKQRVEFLV 205	1948.23	-0.46	96.9%	85.1%
31 of 90	4/14/2011	18	195 YSPKQRVEFLVNTWKSCK 212	2238.64	-1.21	97.9%	76.6%
32 of 90	4/14/2011	18	202 EFLVNTWKSCKCPMGFSY 219	2165.58	-0.4	92.2%	82.0%
33 of 90	4/14/2011	16	209 KSKKCPMGFSYDTRCF 224	1898.27	-0.8	88.6%	76.9%
34 of 90	4/14/2011	15	214 PMGFSYDTRCFDSTV 228	1725.93	-0.24	91.8%	88.3%
35 of 90	4/14/2011	18	218 SYDTRCFDSTVTESDIRV 235	2094.26	-0.59	95.5%	85.5%
36 of 90	4/14/2011	16	225 DSTVTESDIRVEESY 240	1842.95	-0.61	92.3%	89.0%
37 of 90	4/14/2011	17	230 ESDIRVEESYQCCDLA 246	1973.18	-0.27	97.4%	89.6%
38 of 90	4/14/2011	18	236 EESYQCCDLAPEARQAI 253	2039.29	-0.33	96.9%	89.5%
39 of 90	4/14/2011	18	243 CDLAPEARQAIRSLTERL 260	2042.36	-0.38	84.3%	81.7%
40 of 90	4/14/2011	17	250 RQAIRSLTERLYIGGPL 266	1943.3	-0.21	97.2%	82.0%
41 of 90	4/14/2011	15	256 LTERLYIGGPLTNSK 270	1661.93	-0.36	90.8%	82.9%
42 of 90	4/14/2011	18	260 LYIGGPLTNSKGQNCGYR 277	1941.21	-0.64	96.0%	85.0%
43 of 90	4/14/2011	18	267 TNSKGQNCGYRRCRASGV 284	1957.2	-1.21	97.6%	78.4%
44 of 90	4/14/2011	18	274 CGYRRCRASGVLTTCG 291	1904.19	-0.29	95.4%	80.7%
45 of 90	4/14/2011	18	281 ASGVLTTSCGNTLTCYLK 298	1832.14	0.47	88.0%	88.5%
46 of 90	4/14/2011	18	288 SCGNTLTCYLKATAACRA 305	1847.18	0.32	93.5%	84.4%
47 of 90	4/14/2011	19	295 CYLKATAACRAAKLQDCTM 313	2061.51	0.21	98.9%	81.9%
48 of 90	4/14/2011	18	303 CRAAKLQDCTMLVNGDDL 320	1966.3	-0.05	97.5%	86.2%
49 of 90	4/14/2011	18	310 DCTMLVNGDDLTVVICESA 327	1897.19	0.78	97.9%	89.3%
50 of 90	4/14/2011	18	317 GDDLTVVICESAGTQEDAA 334	1792.91	0.07	92.8%	88.7%
51 of 90	4/14/2011	16	324 CESAGTQEDAAALRAF 339	1639.77	-0.14	97.8%	87.5%
52 of 90	4/14/2011	18	329 TQEDAAALRAFTEAMTRY 346	2045.28	-0.49	85.4%	85.7%
53 of 90	4/14/2011	18	336 LRAFTEAMTRYSAPPGBP 353	1980.25	-0.6	96.4%	85.5%
54 of 90	4/14/2011	18	343 MTRYSAPPGBPQPEYDL 360	2034.25	-1.31	95.6%	89.9%
55 of 90	4/14/2011	18	350 PGDPPQPEYDLELITSCS 367	1961.15	-0.74	97.9%	89.6%
56 of 90	4/14/2011	18	357 EYDLELITSCSSNSVAH 374	1967.16	0.13	Crude	89.6%
57 of 90	4/14/2011	18	364 TSCSSNSVAHDASGKRV 381	1804.97	-0.28	99.4%	79.5%
58 of 90	4/14/2011	16	371 SVAHDASGKRVYYLTR 386	1823.06	-0.57	98.3%	76.2%
59 of 90	4/14/2011	18	376 ASGKRVYYLTRDPTTPLA 393	2009.31	-0.56	88.8%	81.5%
60 of 90	4/14/2011	18	383 YLTRDPTTPLARAAWETA 400	2033.29	-0.52	88.0%	85.0%
61 of 90	4/14/2011	16	390 TPLARAAWETARHTPI 405	1791.06	-0.4	84.9%	79.7%
62 of 90	4/14/2011	18	395 AAWETARHTPINSWLGNI 412	2037.28	-0.33	92.8%	85.6%
63 of 90	4/14/2011	18	402 HTPINSWLGNIIMYAPTL 419	2041.42	0.37	81.8%	89.6%
64 of 90	4/14/2011	18	409 LGNIIMYAPTLWARMILM 426	2107.69	1.18	96.3%	90.2%
65 of 90	4/14/2011	18	416 APTLWARMILMTHFFSIL 433	2148.68	1.17	89.6%	86.3%
66 of 90	4/14/2011	17	423 MILMTHFFSILLAQEQL 439	2035.52	1.19	98.6%	89.9%
67 of 90	4/14/2011	15	429 FFSILLAQEQLKAL 443	1750.08	0.68	81.3%	88.7%
68 of 90	4/14/2011	18	433 LLAQEQLKALDCQIYGA 450	2006.32	0.06	97.7%	89.8%
69 of 90	4/14/2011	18	440 EKALDCQIYGACYSIEPL 457	2016.34	0.11	91.8%	89.8%
70 of 90	4/14/2011	17	447 IYGACYSIEPLDLPQII 463	1908.26	0.73	100.0%	89.0%
71 of 90	4/14/2011	17	453 SIEPLDLPQIIERLHGL 469	1943.29	0.15	97.8%	85.0%
72 of 90	4/14/2011	17	459 LPQIIERLHGLSAFTLH 475	1945.31	0.44	96.8%	81.0%
73 of 90	4/14/2011	18	465 RLHGLSAFTLHSPGEI 482	1985.25	-0.04	100.0%	81.5%
74 of 90	4/14/2011	18	472 FTLHSPGEINRVASCL 489	1994.27	0.13	100.0%	85.4%

Peptide	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Hydrophilicity	Purity by HPLC ^a	Peptide Content ^b
75 of 90	4/14/2011	16	479 PGEINRVASCLRKLGV 494	1712.06	0.11	97.2%	79.0%
76 of 90	4/14/2011	18	484 RVASCLRKLGVPPLRTWR 501	2108.6	-0.21	100.0%	75.8%
77 of 90	4/14/2011	18	491 KLGVPPLRTWRHRARSVR 508	2185.63	-0.99	98.2%	71.6%
78 of 90	4/14/2011	15	498 RTWRHRARSVRAKLL 512	1906.29	-1.11	98.7%	67.6%
79 of 90	4/14/2011	18	502 HRARSVRAKLLSQGGRAA 519	1934.25	-0.67	100.0%	70.9%
80 of 90	4/14/2011	18	509 AKLLSQGGRAATCGRYLF 526	1912.26	0.09	82.0%	80.7%
81 of 90	4/14/2011	18	516 GRAATCGRYLFNWAVRTK 533	2070.42	-0.37	100.0%	78.4%
82 of 90	4/14/2011	17	523 RYLFNWAVRTKLTPI 539	2119.6	-0.05	98.8%	78.5%
83 of 90	4/14/2011	17	529 AVRTKLTPIPAASQL 545	1807.23	0.25	85.4%	79.9%
84 of 90	4/14/2011	18	535 KLTPIPAASQLDLSGWV 552	1943.29	0.49	92.7%	89.5%
85 of 90	4/14/2011	19	542 ASQLDLSGWVAGYSGGDI 560	1943.12	0.32	83.2%	89.1%
86 of 90	4/14/2011	18	550 WFVAGYSGGDIYHLSLRA 567	1986.19	0.03	98.9%	85.3%
87 of 90	4/14/2011	18	557 GGDIYHLSLRARPRWFPL 574	2128.44	-0.63	81.8%	78.7%
88 of 90	4/14/2011	18	564 LSRARPRWFPLCLLLSV 581	2140.69	0.83	96.9%	82.4%
89 of 90	4/14/2011	18	571 WFPLCLLLSVGVGIYLL 588	2019.58	2.19	Crude	89.6%
90 of 90	4/14/2011	14	578 LLSVGVGIYLLPNR 591	1513.86	1.11	80.3%	86.4%

^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 90	Expected	3.00			1.00		1.00		1.00	1.00		1.00		1.00	2.00	3.00	1.00	1.00	
	Actual	2.70			0.54 ^b		1.02		0.95	1.04		0.74		1.11	2.00	2.80	0.00 ^a	0.98	
2 of 90	Expected	3.00			1.00	2.00	1.00		2.00	2.00	1.00			2.00	1.00	2.00	1.00		
	Actual	2.77			0.55 ^b	1.80	1.09		1.75	1.77	0.96			2.00	1.00	1.80	0.00 ^a		
3 of 90	Expected	2.00		2.00	1.00	2.00			1.00	3.00	1.00			3.00	3.00				
	Actual	2.08		1.90	0.49 ^b	1.96			1.05	3.20	0.95			3.00	2.95				
4 of 90	Expected		1.00	3.00				2.00	1.00	4.00	1.00	1.00		2.00	2.00				1.00
	Actual		1.04	2.80				1.80	1.01	3.65	1.11	0.95		2.00	1.96				0.93
5 of 90	Expected	1.00	2.00	2.00				2.00		2.00		1.00			3.00	2.00		1.00	1.00
	Actual	0.97	2.10	1.84				2.00		1.85		1.00			2.85	1.91		0.86	0.84
6 of 90	Expected	2.00	2.00	1.00		1.00		2.00		1.00	1.00	1.00			3.00	2.00		1.00	1.00
	Actual	1.89	2.20	0.90		1.05		1.75		1.00	1.10	1.00			3.00	1.85		0.96	0.86
7 of 90	Expected	1.00	3.00	1.00		1.00				2.00	2.00		1.00		3.00	3.00			1.00
	Actual	0.98	3.00	0.97		1.04				1.85	1.96		0.97		2.80	2.65			0.94
8 of 90	Expected		2.00	3.00		2.00		1.00		3.00	2.00		1.00			1.00		1.00	2.00
	Actual		2.11	2.65		1.90		1.00		2.79	1.89		1.05			0.98		0.99	1.76
9 of 90	Expected		2.00	4.00		2.00		1.00		3.00	1.00	1.00	1.00					1.00	2.00
	Actual		2.10	3.60		2.01		1.03		2.70	1.05	0.97	1.00					1.02	1.73
10 of 90	Expected	2.00	1.00	3.00		1.00		1.00		1.00	3.00	1.00			1.00	1.00		1.00	2.00
	Actual	1.70	1.02	2.60		0.87		1.00		0.80	2.70	0.97			0.96	0.81		1.05	1.65
11 of 90	Expected	3.00				1.00			1.00	3.00	5.00	1.00			2.00	1.00			1.00
	Actual	2.75				1.08			1.10	2.80	4.65	0.98			1.95	0.83			1.00
12 of 90	Expected	3.00			1.00	2.00			1.00	3.00	3.00				2.00	1.00			1.00
	Actual	3.00			0.57 ^b	2.04			1.03	3.10	2.75				1.99	0.82			0.96

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)
13 of 90	Expected	2.00			1.00	2.00		1.00	1.00	3.00	3.00			2.00	2.00	1.00			
	Actual	1.85			0.55 ^b	2.05		1.04	1.13	2.78	2.72			2.00	1.80	0.80			
14 of 90	Expected	3.00			1.00		2.00	1.00		1.00	3.00		1.00	2.00	2.00	1.00		1.00	
	Actual	2.74			0.65 ^b		2.01	1.05		0.99	2.70		0.93	2.00	1.86	0.84		0.94	
15 of 90	Expected	2.00	1.00	2.00			2.00	1.00		1.00	3.00		1.00		2.00			1.00	1.00
	Actual	1.78	0.78	1.85			2.11	1.00		1.05	2.70		1.11		1.80			1.15	0.77
16 of 90	Expected	2.00	2.00	3.00			2.00	1.00		1.00	1.00		1.00		2.00			1.00	2.00
	Actual	1.70	2.00	2.64			1.85	1.02		0.95	0.95		1.05		1.90			1.02	1.65
17 of 90	Expected	1.00	3.00	2.00				1.00	1.00	1.00					3.00		1.00	0.00	3.00
	Actual	1.00	2.80	1.90				1.04	0.77	1.04					1.95		0.00 ^a	0.00	2.77
18 of 90	Expected	1.00	2.00	2.00		1.00		1.00	1.00	2.00					2.00		1.00		2.00
	Actual	0.93	1.97	1.80		0.97		1.05	0.87	1.95					2.00		0.00 ^a		1.95
19 of 90	Expected		1.00	3.00		3.00		1.00	2.00	2.00				1.00	1.00	2.00	1.00		1.00
	Actual		0.80	2.89		3.10		0.98	2.00	2.15				1.11	0.95	1.95	0.00 ^a		0.80
20 of 90	Expected	1.00		3.00		3.00			2.00	2.00	1.00	1.00		1.00		4.00			
	Actual	1.00		2.76		2.89			1.80	1.96	1.10	0.94		1.14		3.63			
21 of 90	Expected	1.00		1.00	1.00	2.00			2.00		1.00	1.00	1.00	1.00	1.00	3.00			2.00
	Actual	1.10		0.99	0.47 ^b	2.00			2.06		1.10	1.04	0.71	1.21	0.97	2.69			1.80
22 of 90	Expected	1.00	1.00		1.00	3.00	2.00		1.00		2.00	1.00	1.00	1.00	1.00	1.00			2.00
	Actual	1.04	0.96		0.66 ^b	3.10	2.00		0.85		1.85	1.06	0.84	1.09	0.99	0.75			1.80
23 of 90	Expected	1.00	2.00		1.00	2.00	2.00		1.00	1.00	2.00		1.00	2.00					3.00
	Actual	1.03	2.00		0.57 ^b	1.80	2.20		0.74 ^c	0.75	1.81		0.71	2.24					1.64 ^c
24 of 90	Expected	1.00	3.00	1.00			3.00		1.00	2.00	2.00		1.00	2.00					2.00
	Actual	1.07	2.71	1.00			3.05		0.70 ^c	1.74	1.95		0.86	2.05					1.30 ^c
25 of 90	Expected	1.00	2.00	1.00	1.00	1.00	1.00		1.00	3.00	1.00	1.00	1.00	1.00					3.00
	Actual	1.00	1.71	0.92	0.49 ^b	0.91	1.08		0.65 ^c	2.77	0.87	1.11	0.88	1.20					1.71 ^c
26 of 90	Expected	1.00	1.00	1.00	1.00	1.00	1.00			3.00	1.00	1.00			1.00	1.00		1.00	4.00
	Actual	0.94	0.75	0.86	0.53 ^b	0.74	1.09			2.87	1.00	1.11			1.00	0.74		1.16	2.68 ^c
27 of 90	Expected	2.00		1.00		1.00				2.00	1.00	2.00		1.00	1.00	1.00		1.00	3.00
	Actual	1.85		0.95		1.00				1.89	0.90	2.02		1.09	0.99	1.00		1.06	1.96 ^c
28 of 90	Expected	1.00		1.00		1.00	2.00			1.00		1.00	1.00	1.00	3.00	1.00		1.00	3.00
	Actual	1.00		0.95		1.00	1.89			1.11		1.09	1.09	1.10	2.74	0.88		1.13	1.76 ^c
29 of 90	Expected	1.00	1.00			3.00	2.00				1.00	1.00	1.00	2.00	3.00			2.00	1.00
	Actual	0.95	1.12			2.71	1.96				0.82	0.75	1.05	2.00	3.01			2.10	0.75
30 of 90	Expected		1.00			3.00	1.00			1.00	1.00		2.00	1.00	2.00			2.00	2.00
	Actual		1.03			2.55	0.89			0.88	0.86		2.00	1.02	1.78			2.00	1.80
31 of 90	Expected		1.00	1.00		2.00				1.00	4.00		1.00	1.00	2.00	1.00	1.00	1.00	2.00
	Actual		0.82	0.74		1.77				1.00	4.06		0.87	1.03	1.89	0.80	0.00 ^a	1.09	2.06
32 of 90	Expected			1.00	1.00	1.00	1.00			1.00	3.00	1.00	2.00	1.00	2.00	1.00	1.00	1.00	1.00
	Actual			0.75	0.51 ^b	0.87	1.05			0.80	2.73	1.08	1.79	1.00	1.76	0.72	0.00 ^a	0.97	0.85
33 of 90	Expected		1.00	1.00	2.00		1.00				3.00	1.00	2.00	1.00	2.00	1.00		1.00	
	Actual		1.08	0.94	0.95 ^b		0.94				2.79	0.97	1.88	1.11	1.89	0.85		1.00	
34 of 90	Expected		1.00	2.00	1.00		1.00					1.00	2.00	1.00	2.00	2.00		1.00	1.00
	Actual		1.06	1.80	0.67 ^b		0.99					1.06	2.00	1.06	1.84	1.75		1.06	1.00
35 of 90	Expected		2.00	3.00	1.00	1.00			1.00				1.00		3.00	3.00		1.00	2.00
	Actual		1.65	2.91	0.55 ^b	0.98			0.84				1.02		3.10	2.67		1.00	1.88
36 of 90	Expected		1.00	2.00		3.00			2.00						3.00	2.00		1.00	2.00
	Actual		0.80	2.07		3.10			1.81						2.98	1.79		1.00	2.13

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 90	Expected	1.00	1.00	2.00	2.00	4.00			2.00	1.00					2.00			1.00	1.00
	Actual	1.08	1.03	1.89	0.97 ^b	3.74			1.75	1.14					1.75			0.84	1.00
38 of 90	Expected	3.00	1.00	1.00	2.00	5.00			2.00	1.00				1.00	1.00			1.00	
	Actual	2.71	1.20	1.00	0.94 ^b	4.66			1.80	1.14				1.10	0.99			0.88	
39 of 90	Expected	3.00	3.00	1.00	1.00	3.00			1.00	3.00				1.00	1.00	1.00			
	Actual	3.10	2.75	1.07	0.61 ^b	3.00			0.80	2.94				1.14	0.95	0.96			
40 of 90	Expected	1.00	3.00			2.00	2.00		2.00	3.00				1.00	1.00	1.00		1.00	
	Actual	1.12	2.69			1.80	1.92		1.70	3.11				1.21	0.95	0.86		1.00	
41 of 90	Expected		1.00	1.00		1.00	2.00		1.00	3.00	1.00			1.00	1.00	2.00		1.00	
	Actual		1.00	0.90		0.92	1.80		0.99	2.69	0.89			1.04	0.97	1.80		0.89	
42 of 90	Expected		1.00	2.00	1.00	1.00	4.00		1.00	2.00	1.00			1.00	1.00	1.00		2.00	
	Actual		0.92	2.00	0.50 ^b	1.09	3.70		1.11	2.02	1.08			1.15	1.00	0.90		1.89	
43 of 90	Expected	1.00	3.00	2.00	2.00	1.00	3.00								2.00	1.00		1.00	1.00
	Actual	0.97	3.10	1.88	1.10 ^b	1.03	3.18				0.96				1.97	1.00		1.10	1.04
44 of 90	Expected	1.00	3.00	1.00	3.00		3.00			1.00					2.00	2.00		1.00	1.00
	Actual	1.18	3.10	0.94	1.47 ^b		2.89			0.99					1.70	1.79		1.23	1.00
45 of 90	Expected	1.00		1.00	2.00		2.00			3.00	1.00				2.00	4.00		1.00	1.00
	Actual	0.89		1.00	0.97 ^b		2.12			2.81	0.95				1.81	3.70		1.19	0.78
46 of 90	Expected	4.00	1.00	1.00	3.00		1.00			2.00	1.00				1.00	3.00		1.00	
	Actual	3.68	1.00	0.96	1.49 ^b		1.14			2.05	0.95				0.81	2.61		1.20	
47 of 90	Expected	5.00	1.00	1.00	3.00	1.00				2.00	2.00	1.00				2.00		1.00	
	Actual	4.80	1.13	1.00	1.48 ^b	1.06				1.83	1.99	0.96				1.90		0.99	
48 of 90	Expected	2.00	1.00	4.00	2.00	1.00	1.00			3.00	1.00	1.00				1.00			1.00
	Actual	1.94	1.17	3.68	1.05 ^b	0.98	1.00			2.76	0.97	1.00				0.98			0.85
49 of 90	Expected	1.00		4.00	2.00	1.00	1.00		1.00	2.00		1.00			1.00	1.00			3.00
	Actual	1.00		4.04	0.95 ^b	1.07	1.09		0.81 ^c	1.82		0.85			0.95	0.98			1.95 ^c
50 of 90	Expected	3.00		3.00	1.00	3.00	2.00		1.00	1.00					1.00	1.00			2.00
	Actual	2.70		2.73	0.61 ^b	2.65	2.10		0.85 ^c	1.00					0.94	0.80			0.98 ^c
51 of 90	Expected	5.00	1.00	1.00	1.00	3.00	1.00			1.00			1.00		1.00	1.00			
	Actual	4.71	1.14	1.05	0.52 ^b	3.00	1.07			0.98			1.00		1.00	0.90			
52 of 90	Expected	5.00	2.00	1.00		3.00				1.00		1.00	1.00			3.00		1.00	
	Actual	4.76	1.90	1.20		3.10				1.03		1.05	1.00			2.80		1.02	
53 of 90	Expected	3.00	2.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	3.00	1.00	2.00		1.00	
	Actual	3.00	1.87	1.16		1.10	1.09			1.00	0.90	1.00	2.95	0.95	1.66			0.99	
54 of 90	Expected	1.00	1.00	2.00		2.00	1.00			1.00		1.00		5.00	1.00	1.00		2.00	
	Actual	0.97	1.07	1.96		2.12	0.97			1.08		0.89		5.00	0.97	0.85		1.91	
55 of 90	Expected			2.00	1.00	3.00	1.00		1.00	2.00				4.00	2.00	1.00		1.00	
	Actual			1.98	0.48 ^b	2.98	1.08		1.06	1.96				4.00	1.80	0.91		1.12	
56 of 90	Expected	1.00		2.00	1.00	2.00		1.00	1.00	2.00					4.00	1.00		1.00	2.00
	Actual	0.79		1.82	0.58 ^b	2.14		0.74	0.61	1.75					3.66	0.73		1.19	1.75
57 of 90	Expected	2.00	1.00	2.00	1.00		1.00	1.00			1.00				5.00	1.00			3.00
	Actual	1.94	1.00	1.99	0.51 ^b		1.08	1.20			1.08				4.66	0.97			2.77
58 of 90	Expected	2.00	2.00	1.00			1.00	1.00		1.00	1.00				2.00	1.00		2.00	2.00
	Actual	2.04	2.00	0.92			1.06	1.11		0.95	1.06				1.98	0.95		1.94	1.61
59 of 90	Expected	2.00	2.00	1.00			1.00			2.00	1.00			2.00	1.00	3.00		2.00	1.00
	Actual	2.02	2.00	0.94			1.04			1.85	0.96			2.09	1.07	2.65		1.73	0.75
60 of 90	Expected	4.00	2.00	1.00		1.00				2.00				2.00		4.00	1.00	1.00	
	Actual	3.82	2.00	1.01		1.01				1.76				2.10		3.77	0.00 ^a	0.86	

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)
61 of 90	Expected	4.00	2.00			1.00		1.00	1.00	1.00				2.00		3.00	1.00		
	Actual	3.75	2.11			0.99		1.05	1.00	0.97				2.16		2.85	0.00 ^a		
62 of 90	Expected	3.00	1.00	2.00		1.00	1.00	1.00	2.00	1.00				1.00	1.00	2.00	2.00		
	Actual	2.83	1.03	1.95		0.99	1.00	1.04	1.93	1.00				1.15	1.00	1.80	0.00 ^a		
63 of 90	Expected	1.00		2.00			1.00	1.00	3.00	2.00		1.00		2.00	1.00	2.00	1.00	1.00	
	Actual	1.00		1.79			1.06	1.05	1.80 ^c	2.02		0.95		2.13	0.95	1.80	0.00 ^a	1.20	
64 of 90	Expected	2.00	1.00	1.00			1.00		3.00	3.00		3.00		1.00		1.00	1.00	1.00	
	Actual	2.00	1.09	0.98			1.07		1.66 ^c	2.77		2.78		1.16		0.85	0.00 ^a	0.96	
65 of 90	Expected	2.00	1.00					1.00	2.00	3.00		2.00	2.00	1.00	1.00	2.00	1.00		
	Actual	2.00	1.17					0.90	2.02	2.85		1.70	1.81	1.13	0.96	1.71	0.00 ^a		
66 of 90	Expected	1.00				3.00		1.00	2.00	4.00		2.00	2.00		1.00	1.00			
	Actual	1.10				3.11		0.81	1.71	3.64		1.92	1.93		1.00	0.75			
67 of 90	Expected	2.00				4.00			1.00	4.00	1.00		2.00		1.00				
	Actual	2.11				4.05			0.83	3.80	1.06		2.03		1.00				
68 of 90	Expected	3.00		1.00	1.00	5.00	1.00		1.00	4.00	1.00							1.00	
	Actual	3.00		0.97	0.57 ^b	4.98	0.90		0.79	3.77	1.10							0.82	
69 of 90	Expected	2.00		1.00	2.00	3.00	1.00		2.00	2.00	1.00			1.00	1.00			2.00	
	Actual	1.83		0.73	0.93 ^b	2.93	1.09		1.85	2.00	0.80			1.20	1.11			1.84	
70 of 90	Expected	1.00		1.00	1.00	2.00	1.00		4.00	2.00				2.00	1.00			2.00	
	Actual	1.10		1.00	0.61 ^b	1.80	1.04		2.87 ^c	2.01				2.29	0.88			1.87	
71 of 90	Expected		1.00	1.00		3.00	1.00	1.00	3.00	4.00				2.00	1.00				
	Actual		1.00	0.95		2.61	1.13	1.10	1.68 ^c	3.70				2.10	1.00				
72 of 90	Expected	1.00	1.00			2.00	1.00	2.00	2.00	4.00			1.00	1.00	1.00	1.00			
	Actual	1.00	0.88			1.95	1.14	2.17	1.49 ^c	3.74			1.09	0.75	0.97	0.70			
73 of 90	Expected	1.00	1.00			1.00	2.00	2.00	1.00	3.00			1.00	1.00	3.00	1.00		1.00	
	Actual	1.00	0.79			0.91	1.90	2.07	1.00	2.64			1.04	1.11	2.96	0.81		1.03	
74 of 90	Expected	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00			1.00	1.00	3.00	1.00		1.00	1.00
	Actual	0.91	1.00	0.88	0.68 ^b	1.13	1.09	1.10	0.81	1.86			1.20	1.12	2.99	0.82		1.19	1.00
75 of 90	Expected	1.00	2.00	1.00	1.00	1.00	2.00		1.00	2.00	1.00			1.00	1.00				2.00
	Actual	0.98	2.16	0.91	0.56 ^b	1.02	2.15		1.03	1.97	0.98			1.15	0.70				2.00
76 of 90	Expected	1.00	4.00		1.00		1.00			3.00	1.00			2.00	1.00	1.00	1.00		2.00
	Actual	0.89	3.78		0.67 ^b		1.12			2.81	0.92			1.76	0.80	1.00	0.00 ^a	1.77	
77 of 90	Expected	1.00	5.00				1.00	1.00		2.00	1.00			2.00	1.00	1.00	1.00		2.00
	Actual	1.00	4.75				1.14	0.98		1.98	1.17			1.87	1.00	0.99	0.00 ^a	1.94	
78 of 90	Expected	2.00	5.00					1.00		2.00	1.00				1.00	1.00	1.00		1.00
	Actual	1.84	4.72					1.07		1.91	0.88				1.00	0.97	0.00 ^a		0.96
79 of 90	Expected	4.00	4.00			1.00	2.00	1.00		2.00	1.00				2.00				1.00
	Actual	3.66	3.68			1.02	1.94	0.85		1.74	0.99				2.00				0.86
80 of 90	Expected	3.00	2.00		1.00	1.00	3.00			3.00	1.00		1.00		1.00	1.00		1.00	
	Actual	2.71	2.00		0.56 ^b	0.91	3.14			2.74	0.85		1.05		0.91	0.81		0.85	
81 of 90	Expected	3.00	3.00	1.00	1.00		2.00			1.00	1.00		1.00			2.00	1.00	1.00	1.00
	Actual	3.10	2.89	0.80	0.64 ^b		2.00			1.05	1.08		1.01			1.97	0.00 ^a	1.13	0.94
82 of 90	Expected	1.00	2.00	1.00					1.00	3.00	2.00		1.00	1.00		2.00	1.00	1.00	1.00
	Actual	1.05	2.00	0.75					1.00	3.16	2.17		1.20	1.16		1.95	0.00 ^a	1.14	0.81
83 of 90	Expected	3.00	1.00			1.00			1.00	3.00	2.00			2.00	1.00	2.00			1.00
	Actual	2.71	0.81			0.97			0.95	2.69	1.84			2.05	1.00	1.75			0.85
84 of 90	Expected	2.00		1.00		1.00	1.00		1.00	3.00	1.00		1.00	2.00	2.00	1.00	1.00		1.00
	Actual	1.89		0.99		1.02	1.06		0.90	2.67	0.96		0.80	2.00	1.98	0.88	0.00 ^a		0.92

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)
85 of 90	Expected	2.00		2.00		1.00	4.00		1.00	2.00			1.00		3.00		1.00	1.00	1.00
	Actual	2.00		1.81		1.03	4.05		1.01	2.07			0.92		2.95		0.00 ^a	0.96	0.81
86 of 90	Expected	2.00	1.00	1.00			3.00	1.00	1.00	1.00			1.00		3.00		1.00	2.00	1.00
	Actual	1.90	1.16	0.97			3.09	1.13	0.75	1.04			1.00		3.06		0.00 ^a	1.89	1.11
87 of 90	Expected	1.00	3.00	1.00			2.00	1.00	1.00	2.00			1.00	2.00	2.00		1.00	1.00	
	Actual	0.93	2.92	0.96			1.85	1.18	0.80	1.80			1.06	2.00	1.80		0.00 ^a	0.73	
88 of 90	Expected	1.00	3.00		1.00					6.00			1.00	2.00	2.00		1.00		1.00
	Actual	1.00	3.00		0.63 ^b					5.65			0.85	2.03	1.80		0.00 ^a		0.84
89 of 90	Expected				1.00		2.00		1.00	7.00			1.00	1.00	1.00		1.00	1.00	2.00
	Actual				0.58 ^b		1.82		0.85	5.71			0.90	1.00	0.66		0.00 ^a	0.76	1.73
90 of 90	Expected		1.00	1.00			2.00		1.00	4.00				1.00	1.00			1.00	2.00
	Actual		1.09	0.95			2.00		0.83	3.68				1.00	0.86			0.70	1.98

^aTrp was completely destroyed during hydrolysis

^bCys was partially destroyed during hydrolysis

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

Date: 11 OCT 2011

Signature: *Dorothy C. Young*

Title: Technical Manager, BEI Authentication or designee

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