

Peptide Array, Hepatitis C Virus, H77, NS5A Protein

Catalog No. NR-3755

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Product Description: The 71-peptide array spans the NS5A protein of hepatitis C virus, H77 (genotype 1a; GenPept: AAB67036). Peptides are 13- to 19-mers, with 11 amino acid overlaps.

Lot: N674-1 to N674-71

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 71	7/27/2006	16	1 SGSWLRDIWDWICEVL 16	1978.27	0.22	80.2%	89.7%
2 of 71	7/27/2006	18	6 RDIWDWICEVLSDFKTWL 23	2325.69	-0.03	81.0%	87.2%
3 of 71	7/27/2006	16	13 CEVLSDFKTWLKAKLM 28	1912.36	0.22	86.6%	80.7%
4 of 71	7/27/2006	17	18 DFKTWLKAKLMPQLPGI 34	1986.47	-0.09	87.1%	81.3%
5 of 71	7/27/2006	18	24 KAKLMPQLPGIPFVSCQR 41	2013.52	0	82.2%	81.5%
6 of 71	7/27/2006	18	31 LPGIPFVSCQRYRGVWR 48	2091.49	-0.13	84.5%	82.1%
7 of 71	7/27/2006	17	38 SCQRYRGVWRGDGIMH 54	1978.26	-0.89	99.6%	77.6%
8 of 71	7/27/2006	18	44 RGVWRGDGIMHTRCHCGA 61	2012.34	-0.51	99.9%	74.6%
9 of 71	7/27/2006	18	51 GIMHTRCHCGAEITGHVK 68	1950.31	-0.12	99.6%	74.0%
10 of 71	7/27/2006	18	58 HCGAEITGHVKNGTMRIV 75	1923.26	-0.04	80.4%	77.1%
11 of 71	7/27/2006	17	65 GHVKNGTMRIVGPRTCR 81	1882.26	-0.65	81.2%	73.3%
12 of 71	7/27/2006	18	71 TMRIVGPRTCRNMWSGTF 88	2113.53	-0.3	80.9%	82.3%
13 of 71	7/27/2006	16	78 RTCRNMWSGTFPINAY 93	1917.21	-0.56	81.6%	84.9%
14 of 71	7/27/2006	19	83 MWSGTFPINAYTTGPCTPL 101	2057.39	0.13	81.5%	90.0%
15 of 71	7/27/2006	18	91 NAYTTGPCTPLPAPNYKF 108	1955.24	-0.54	85.4%	89.6%
16 of 71	7/27/2006	18	98 CTPLPAPNYKFALWRVSA 115	2034.43	0.12	81.5%	85.6%
17 of 71	7/27/2006	18	105 NYKFALWRVSAEEYVEIR 122	2273.6	-0.45	80.2%	83.3%
18 of 71	7/27/2006	18	112 RVSAEEYVEIRRVGDFHY 129	2225.47	-0.71	80.3%	79.6%
19 of 71	7/27/2006	15	119 VEIRRVGDFHYVSGM 133	1765.04	-0.02	83.5%	79.5%
20 of 71	7/27/2006	17	123 RVGDFHYVSGMTTDLNLK 139	1940.18	-0.56	81.0%	81.0%
21 of 71	7/27/2006	16	129 YVSGMTTDLNLKCPCQI 144	1773.09	-0.03	82.9%	88.6%
22 of 71	7/27/2006	17	134 TTDNLKCPCQIPSPEFF 150	1940.24	-0.35	82.9%	89.5%
23 of 71	7/27/2006	18	140 CPCQIPSPEFFTELDGVR 157	2038.35	-0.12	98.2%	89.9%
24 of 71	7/27/2006	16	147 PEEFFTELDGVRLHRFA 162	1934.2	-0.21	95.7%	80.9%
25 of 71	7/27/2006	18	152 ELDGVRRLHRFAPPCKPLL 169	2061.5	-0.1	99.9%	78.3%
26 of 71	7/27/2006	18	159 HRFAPPCKPLLREEVSFR 176	2182.6	-0.64	80.5%	76.1%
27 of 71	7/27/2006	17	166 KPLLREEVSFRVGLHEY 182	2072.41	-0.48	83.0%	78.4%
28 of 71	7/27/2006	17	172 EVSFRVGLHEYPVGSQ 188	1917.17	-0.03	81.3%	84.9%
29 of 71	7/27/2006	19	178 GLHEYPVGSQLPCEPEPDV 196	2066.29	-0.61	89.2%	90.1%
30 of 71	7/27/2006	18	186 SQLPCEPEPDVAVLTSML 203	1929.26	0.27	87.5%	89.4%

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Table 1							
Peptide	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Hydrophilicity	Purity by HPLC ^a	Peptide Content ^b
31 of 71	7/27/2006	17	193 EPDVAVLTSMLTDP SHI 209	1825.08	0.25	83.3%	88.9%
32 of 71	7/27/2006	18	199 LTSMLTDP SHITAE AAGR 216	1871.12	-0.06	86.3%	84.5%
33 of 71	7/27/2006	15	206 PSHITAE AAGRRLAR 220	1605.83	-0.55	81.4%	73.8%
34 of 71	7/27/2006	18	210 TAE AAGRRLARGSPPSMA 227	1799.06	-0.48	86.4%	79.8%
35 of 71	7/27/2006	18	217 RLARGSPPSMASSSASQL 234	1803.04	-0.33	90.9%	84.1%
36 of 71	7/27/2006	18	224 PSMASSSASQLSAPSLKA 241	1719.95	0.03	81.9%	88.3%
37 of 71	7/27/2006	17	231 ASQLSAPSLKATCTANH 247	1699.92	-0.13	81.1%	83.3%
38 of 71	7/27/2006	18	237 PSLKATCTANH DSPDAEL 254	1870.04	-0.66	80.9%	84.5%
39 of 71	7/27/2006	18	244 TANH DSPDAEL IEANLLW 261	2009.18	-0.38	80.1%	89.8%
40 of 71	7/27/2006	15	251 DAEL IEANLLWRQEM 265	1831.09	-0.33	91.0%	88.9%
41 of 71	7/27/2006	18	255 IEANLLWRQEMGGNITRV 272	2100.45	-0.24	82.8%	86.0%
42 of 71	7/27/2006	18	262 RQEMGGNITRVESENKV 279	2046.31	-0.96	80.5%	81.8%
43 of 71	7/27/2006	16	269 ITRVESENKV VILDSF 284	1849.13	0.22	80.7%	84.4%
44 of 71	7/27/2006	16	274 SENKV VILDSF DPLVA 289	1746.01	0.51	82.6%	88.5%
45 of 71	7/27/2006	18	279 VILDSF DPLVAEEDEREV 296	2075.27	-0.12	84.0%	90.1%
46 of 71	7/27/2006	18	286 PLVAEEDEREVSVP AEIL 303	1995.23	-0.07	80.5%	89.7%
47 of 71	7/27/2006	18	293 EREVSVPAEILRKSRRFA 310	2143.5	-0.69	86.1%	75.8%
48 of 71	7/27/2006	18	300 AEILRKSRRFARALPVWA 317	2140.58	-0.13	88.1%	75.8%
49 of 71	7/27/2006	15	307 RRFARALPVWARPDY 321	1874.2	-0.71	86.4%	76.7%
50 of 71	7/27/2006	16	311 RALPVWARPDY NPPLV 326	1864.2	-0.31	83.6%	84.5%
51 of 71	7/27/2006	16	316 WARP DY NPPLVETWKK 331	2000.31	-1.35	81.9%	81.4%
52 of 71	7/27/2006	18	321 YNPPLVETWKKPDY EPPV 338	2172.49	-1.21	88.3%	86.4%
53 of 71	7/27/2006	17	328 TWKKPDY EPPV VHGCP L 344	1966.31	-0.76	84.0%	81.2%
54 of 71	7/27/2006	15	334 YEPPV VHGCP LPPPR 348	1657.97	-0.52	80.3%	82.9%
55 of 71	7/27/2006	15	338 VVHGCP LPPPRSPV 352	1551.89	0.03	87.1%	81.9%
56 of 71	7/27/2006	18	342 CPLPPPRSPV PPRKKR 359	2019.51	-1.44	94.0%	74.7%
57 of 71	7/27/2006	15	349 SPPV PPRKKRTVVL 363	1671.08	-0.66	80.0%	74.6%
58 of 71	7/27/2006	16	353 PPRKKRTVVLTESTL 368	1822.2	-0.75	84.9%	76.2%
59 of 71	7/27/2006	18	358 KRTVVLTESTLSTALAE L 375	1932.26	0.41	86.6%	85.0%
60 of 71	7/27/2006	16	365 ESTLSTALAE LATS F 380	1668.88	0.26	92.2%	88.0%
61 of 71	7/27/2006	19	370 TALAELATKSFGSSSTSGI 388	1828.02	0.32	84.4%	88.9%
62 of 71	7/27/2006	18	378 KSFGSSSTSGITGDNTTT 395	1747.8	-0.68	80.4%	88.5%
63 of 71	7/27/2006	16	385 TSGITGDNTTTSSEPA 400	1538.55	-0.78	88.9%	87.1%
64 of 71	7/27/2006	18	390 GDNTTTSSEPA SGCPD 407	1732.77	-1.19	80.2%	88.4%
65 of 71	7/27/2006	17	397 SEPAPSGCPDSDVESY 413	1736.8	-0.99	92.3%	88.4%
66 of 71	7/27/2006	17	403 GCPDSDVESYSSMPPL 419	1780.96	-0.55	83.3%	88.7%
67 of 71	7/27/2006	18	409 DVESYSSMPLEGE PGDP 426	1906.02	-1.03	87.6%	89.3%
68 of 71	7/27/2006	18	416 MPLEGE PGDPDLSDGSW 433	1899.04	-1.01	93.8%	89.3%
69 of 71	7/27/2006	18	423 PGDPDLSDGSWSTVSSGA 440	1734.76	-0.59	80.2%	88.4%
70 of 71	7/27/2006	17	430 DGSWSTVSSGADTEDVV 446	1711.73	-0.35	80.8%	88.2%
71 of 71	7/27/2006	13	436 VSSGADTEDVCC 448	1284.39	0.48	91.9%	84.9%
^a % full-length							
^b Remainder is salt and water							

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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 71	Expected		1.00	2.00	1.00	1.00	1.00		2.00	2.00					2.00		3.00		1.00
	Actual		1.19	1.78	0.49 ^b	0.99	1.11		1.72	2.00					1.90		0.00 ^a		0.97
2 of 71	Expected		1.00	3.00	1.00	1.00			2.00	2.00	1.00		1.00		1.00	1.00	3.00		1.00
	Actual		0.94	2.79	0.53 ^b	1.00			1.70	1.94	0.96		1.02		1.02	0.94	0.00 ^a		0.84
3 of 71	Expected	1.00		1.00	1.00	1.00				3.00	3.00	1.00	1.00		1.00	1.00	1.00		1.00
	Actual	1.06		1.00	0.59 ^b	1.02				2.81	2.83	0.95	1.14		1.14	0.90	0.00 ^a		0.85
4 of 71	Expected	1.00		1.00		1.00	1.00		1.00	3.00	3.00	1.00	1.00	2.00		1.00	1.00		
	Actual	0.99		0.92		0.96	1.11		1.22	2.94	2.74	0.84	1.12	2.16		1.00	0.00 ^a		
5 of 71	Expected	1.00	1.00		1.00	2.00	1.00		1.00	2.00	2.00	1.00	1.00	3.00	1.00				1.00
	Actual	0.89	0.70		0.45 ^b	1.70	0.91		1.04	1.94	1.75	1.01	1.00	3.05	0.71				0.85
6 of 71	Expected		3.00		1.00	1.00	3.00		1.00	1.00			1.00	2.00	1.00		1.00	1.00	2.00
	Actual		3.17		0.43 ^b	0.99	3.08		0.74	0.94			0.88	1.78	0.72		0.00 ^a	1.00	1.71
7 of 71	Expected		3.00	1.00	1.00	1.00	4.00	1.00	1.00			1.00			1.00		1.00	1.00	1.00
	Actual		3.15	0.82	0.46 ^b	0.78	4.00	1.12	0.88			0.75			0.69		0.00 ^a	1.23	0.76
8 of 71	Expected	1.00	3.00	1.00	2.00		4.00	2.00	1.00			1.00				1.00	1.00		1.00
	Actual	0.74	3.00	1.00	0.93 ^b		3.78	2.08	0.86			0.77				1.03	0.00 ^a		0.75
9 of 71	Expected	1.00	1.00		2.00	1.00	3.00	3.00	2.00		1.00	1.00				2.00			1.00
	Actual	1.09	0.88		0.91 ^b	1.03	3.00	2.78	1.78		0.80	0.74				1.65			0.89
10 of 71	Expected	1.00	1.00	1.00	1.00	1.00	3.00	2.00	2.00		1.00	1.00				2.00			2.00
	Actual	1.02	0.97	1.00	0.53 ^b	0.99	2.98	1.93	1.46 ^c		1.00	1.15				1.86			1.55 ^c
11 of 71	Expected		3.00	1.00	1.00		3.00	1.00	1.00		1.00	1.00		1.00		2.00			2.00
	Actual		2.91	1.12	0.51 ^b		3.00	0.96	0.64 ^c		0.97	1.12		1.19		1.67			1.55 ^c
12 of 71	Expected		3.00	1.00	1.00		2.00		1.00			2.00	1.00	1.00	1.00	3.00	1.00		1.00
	Actual		2.90	1.04	0.45 ^b		1.93		0.61 ^c			1.89	0.90	1.08	1.00	2.54	0.00 ^a		0.65 ^c
13 of 71	Expected	1.00	2.00	2.00	1.00		1.00		1.00			1.00	1.00	1.00	1.00	2.00	1.00	1.00	
	Actual	0.98	2.03	1.90	0.51 ^b		1.00		1.03			0.97	0.97	1.08	0.94	1.57	0.00 ^a	1.07	
14 of 71	Expected	1.00		1.00	1.00		2.00		1.00	1.00		1.00	1.00	3.00	1.00	4.00	1.00	1.00	
	Actual	0.96		0.89	0.53 ^b		1.94		0.98	1.01		0.97	1.00	3.07	0.92	3.73	0.00 ^a	1.06	
15 of 71	Expected	2.00		2.00	1.00		1.00			1.00	1.00		1.00	4.00		3.00		2.00	
	Actual	2.07		2.07	0.58 ^b		0.99			1.06	0.90		0.97	4.09		2.68		2.00	
16 of 71	Expected	3.00	1.00	1.00	1.00					2.00	1.00		1.00	3.00	1.00	1.00	1.00	1.00	1.00
	Actual	2.73	0.78	0.96	0.59 ^b					1.90	0.88		1.06	3.21	0.76	1.00	0.00 ^a	1.16	0.81
17 of 71	Expected	2.00	2.00	1.00		3.00			1.00	1.00	1.00		1.00		1.00		1.00	2.00	2.00
	Actual	1.99	1.85	0.92		2.96			0.82	1.00	1.09		1.00		1.00		0.00 ^a	1.74	1.99
18 of 71	Expected	1.00	3.00	1.00		3.00	1.00	1.00	1.00				1.00		1.00			2.00	3.00
	Actual	0.99	2.84	0.96		2.89	1.09	1.15	0.88				1.15		1.00			2.15	2.78
19 of 71	Expected		2.00	1.00		1.00	2.00	1.00	1.00			1.00	1.00		1.00			1.00	3.00
	Actual		1.84	1.00		0.83	1.94	1.02	0.80			1.00	1.01		0.97			0.94	2.66
20 of 71	Expected		1.00	3.00			2.00	1.00		1.00	1.00	1.00	1.00		1.00	2.00		1.00	2.00
	Actual		0.91	3.00			1.95	0.95		1.16	1.10	1.10	0.97		1.03	1.84		1.13	1.69
21 of 71	Expected			2.00	2.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	2.00		1.00	1.00
	Actual			2.00	0.96 ^b	0.96	0.98		0.99	0.98	1.01	0.93		1.03	0.91	1.82		0.72	0.77
22 of 71	Expected			2.00	2.00	2.00			1.00	1.00	1.00		2.00	3.00	1.00	2.00			
	Actual			2.08	0.96 ^b	2.00			0.93	0.96	1.05		1.88	2.87	0.99	1.85			
23 of 71	Expected		1.00	1.00	2.00	3.00	1.00		1.00	1.00			2.00	3.00	1.00	1.00			1.00
	Actual		0.80	1.10	0.95 ^b	3.08	0.94		0.95	0.98			1.78	2.77	0.91	0.89			1.00
24 of 71	Expected	1.00	2.00	1.00		2.00	1.00	1.00		2.00			3.00	1.00		1.00			1.00
	Actual	0.76	2.02	1.11		2.02	0.92	0.81		1.81			2.71	1.00		0.92			1.08
25 of 71	Expected	1.00	2.00	1.00	1.00	1.00	1.00	1.00		4.00	1.00		1.00	3.00					1.00
	Actual	1.03	1.84	1.00	0.46 ^b	0.94	0.95	1.02		3.66	0.93		0.94	2.96					0.87
26 of 71	Expected	1.00	3.00		1.00	2.00		1.00		2.00	1.00		2.00	3.00	1.00				1.00
	Actual	1.07	2.88		0.54 ^b	2.19		0.95		1.88	0.94		1.70	2.92	1.00				1.01

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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)
27 of 71	Expected		2.00			3.00	1.00	1.00		3.00	1.00		1.00	1.00	1.00			1.00	2.00
	Actual		1.95			2.99	0.90	0.92		2.67	1.12		0.91	1.12	1.00			0.81	2.00
28 of 71	Expected		1.00			3.00	2.00	1.00		2.00			1.00	1.00	2.00			1.00	3.00
	Actual		0.80			3.15	1.83	0.99		2.07			0.89	1.10	2.00			0.96	3.00
29 of 71	Expected			1.00	1.00	4.00	2.00	1.00		2.00				4.00	1.00			1.00	2.00
	Actual			1.05	0.46 ^b	3.83	1.95	1.07		1.88				3.74	0.77			1.00	1.97
30 of 71	Expected	1.00		1.00	1.00	3.00				3.00		1.00		3.00	2.00	1.00			2.00
	Actual	1.04		1.06	0.54 ^b	2.79				2.72		1.02		3.00	1.78	0.95			1.86
31 of 71	Expected	1.00		2.00		1.00		1.00	1.00	2.00		1.00		2.00	2.00	2.00			2.00
	Actual	0.90		2.10		1.04		0.82	0.83	1.76		1.02		2.00	1.96	1.90			1.64
32 of 71	Expected	3.00	1.00	1.00		1.00	1.00	1.00	1.00	2.00		1.00		1.00	2.00	3.00			
	Actual	2.72	0.94	1.07		0.84	0.80	0.74	0.72	2.12		0.68		1.00	1.90	2.69			
33 of 71	Expected	4.00	3.00			1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00			
	Actual	3.92	2.88			1.02	0.98	0.88	0.89	1.02				1.00	0.93	1.02			
34 of 71	Expected	5.00	3.00			1.00	2.00			1.00		1.00		2.00	2.00	1.00			
	Actual	4.80	2.96			1.01	2.00			1.00		0.84		2.04	1.95	1.00			
35 of 71	Expected	3.00	2.00			1.00	1.00			2.00		1.00		2.00	6.00				
	Actual	2.75	2.10			1.01	1.06			2.00		0.75		1.87	5.55				
36 of 71	Expected	4.00				1.00				2.00	1.00	1.00		2.00	7.00				
	Actual	3.81				1.04				2.00	1.02	0.90		2.12	6.49				
37 of 71	Expected	4.00		1.00	1.00	1.00		1.00		2.00	1.00			1.00	3.00	2.00			
	Actual	3.89		0.88	0.50 ^b	1.06		0.88		2.00	1.12			1.13	3.05	1.63			
38 of 71	Expected	3.00		3.00	1.00	1.00		1.00		2.00	1.00			2.00	2.00	2.00			
	Actual	3.02		3.00	0.57 ^b	0.99		1.14		1.92	1.01			2.09	1.84	1.65			
39 of 71	Expected	3.00		4.00		2.00		1.00	1.00	3.00				1.00	1.00	1.00	1.00		
	Actual	2.82		4.00		1.90		1.01	0.90	2.77				1.07	0.92	0.91	0.00 ^a		
40 of 71	Expected	2.00	1.00	2.00		4.00			1.00	3.00		1.00					1.00		
	Actual	2.05	1.05	2.00		3.79			0.90	2.72		0.80					0.00 ^a		
41 of 71	Expected	1.00	2.00	2.00		3.00	2.00		2.00	2.00		1.00				1.00	1.00		1.00
	Actual	1.00	2.15	2.07		2.81	1.99		1.70	1.86		0.94				0.92	0.00 ^a		0.99
42 of 71	Expected		2.00	2.00		4.00	2.00		1.00		1.00	1.00			1.00	1.00			3.00
	Actual		1.86	2.00		3.79	2.03		1.04		0.94	0.89			1.00	0.90			1.95 ^c
43 of 71	Expected		1.00	2.00		2.00			2.00	1.00	1.00		1.00		2.00	1.00			3.00
	Actual		0.78	2.27		2.00			1.20 ^c	0.83	0.95		1.03		2.00	0.69			1.79 ^c
44 of 71	Expected	1.00		3.00		1.00			1.00	2.00	1.00		1.00	1.00	2.00				3.00
	Actual	0.85		2.73		0.99			0.60 ^c	1.71	0.74		1.00	1.00	2.03				1.70 ^c
45 of 71	Expected	1.00	1.00	3.00		4.00			1.00	2.00			1.00	1.00	1.00				3.00
	Actual	1.00	0.98	3.05		4.06			0.63 ^c	1.78			0.78	0.94	0.74				2.17 ^c
46 of 71	Expected	2.00	1.00	1.00		5.00			1.00	2.00				2.00	1.00				3.00
	Actual	2.09	1.08	1.14		5.02			0.88	1.74				2.00	0.85				2.81
47 of 71	Expected	2.00	4.00			3.00			1.00	1.00	1.00		1.00	1.00	2.00				2.00
	Actual	2.14	4.00			3.16			0.81	0.77	0.99		0.89	1.07	1.94				1.91
48 of 71	Expected	4.00	4.00			1.00			1.00	2.00	1.00		1.00	1.00	1.00		1.00		1.00
	Actual	3.77	3.90			1.12			0.78	1.87	1.19		0.94	1.00	1.00		0.00 ^a		0.84
49 of 71	Expected	3.00	4.00	1.00						1.00			1.00	2.00			1.00	1.00	1.00
	Actual	3.00	3.83	1.05						0.93			0.86	1.91			0.00 ^a	0.96	0.88
50 of 71	Expected	2.00	2.00	2.00						2.00				4.00			1.00	1.00	2.00
	Actual	2.00	1.93	2.11						1.75				3.68			0.00 ^a	1.00	1.74
51 of 71	Expected	1.00	1.00	2.00		1.00				1.00	2.00			3.00		1.00	2.00	1.00	1.00
	Actual	0.95	0.97	2.00		0.86				0.93	1.85			2.91		0.97	0.00 ^a	1.11	0.86
52 of 71	Expected			2.00		2.00				1.00	2.00			5.00		1.00	1.00	2.00	2.00
	Actual			2.10		1.94				0.97	2.00			4.70		0.91	0.00 ^a	1.89	1.76

Certificate of Analysis for NR-3755

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)
53 of 71	Expected			1.00	1.00	1.00	1.00	1.00		1.00	2.00			4.00		1.00	1.00	1.00	2.00
	Actual			1.07	0.55 ^b	1.02	1.01	0.78		0.97	2.00			3.50		0.82	0.00 ^a	1.11	0.93 ^c
54 of 71	Expected		1.00		1.00	1.00	1.00	1.00		1.00				6.00				1.00	2.00
	Actual		1.15		0.48 ^b	1.05	1.10	1.00		1.02				5.53				1.24	0.96 ^c
55 of 71	Expected		1.00		1.00		1.00	1.00		1.00				6.00	1.00				3.00
	Actual		1.00		0.52 ^b		0.95	0.81		0.98				5.49	1.09				2.12 ^c
56 of 71	Expected		3.00		1.00					1.00	2.00			9.00	1.00				1.00
	Actual		3.00		0.47 ^b					1.06	1.95			8.46	1.13				0.92
57 of 71	Expected		2.00							1.00	2.00			5.00	1.00	1.00			3.00
	Actual		1.88							0.92	2.10			4.55	1.00	1.05			2.09 ^c
58 of 71	Expected		2.00			1.00				2.00	2.00			3.00	1.00	3.00			2.00
	Actual		1.69			1.07				1.93	2.09			3.00	1.15	2.71			1.03 ^c
59 of 71	Expected	2.00	1.00			2.00				4.00	1.00				2.00	4.00			2.00
	Actual	2.02	0.77			2.00				3.66	0.90				2.18	3.78			0.93 ^c
60 of 71	Expected	3.00				2.00				3.00	1.00		1.00		3.00	3.00			
	Actual	3.00				2.13				2.79	1.18		0.89		2.76	2.68			
61 of 71	Expected	3.00				1.00	2.00		1.00	2.00	1.00		1.00		5.00	3.00			
	Actual	2.68				1.13	1.90		0.99	2.00	0.88		0.87		4.76	2.61			
62 of 71	Expected			2.00			3.00		1.00		1.00		1.00		5.00	5.00			
	Actual			2.05			2.78		1.00		0.75		0.81		4.75	4.00			
63 of 71	Expected	1.00		2.00		1.00	2.00		1.00					1.00	3.00	5.00			
	Actual	0.84		2.12		0.91	1.98		1.00					0.96	3.11	3.93			
64 of 71	Expected	1.00		3.00	1.00	1.00	2.00							4.00	3.00	3.00			
	Actual	1.00		2.85	0.47 ^b	0.98	2.08							3.38	3.02	2.54			
65 of 71	Expected	1.00		2.00	1.00	2.00	1.00							4.00	4.00			1.00	1.00
	Actual	1.00		1.93	1.08 ^b	1.85	1.14							3.63	3.69			1.13	1.00
66 of 71	Expected			2.00	1.00	1.00	1.00			1.00		1.00		4.00	4.00			1.00	1.00
	Actual			1.95	0.63 ^b	0.89	1.00			1.16		1.13		3.97	3.85			1.11	0.93
67 of 71	Expected			2.00		3.00	2.00			1.00		1.00		4.00	3.00			1.00	1.00
	Actual			1.77		2.73	1.86			1.06		0.71		4.41	2.85			0.85	1.00
68 of 71	Expected			3.00		2.00	3.00			2.00		1.00		4.00	2.00		1.00		
	Actual			3.00		1.98	3.10			1.98		0.74		3.81	2.04		0.00 ^a		
69 of 71	Expected	1.00		3.00			3.00			1.00				2.00	5.00	1.00	1.00		1.00
	Actual	0.90		2.98			3.12			1.09				2.00	4.34	0.76	0.00 ^a		0.88
70 of 71	Expected	1.00		3.00		1.00	2.00								4.00	2.00	1.00		3.00
	Actual	1.00		2.78		0.97	2.06								3.72	1.59	0.00 ^a		1.66 ^c
71 of 71	Expected	1.00		2.00	2.00	1.00	1.00								2.00	1.00			3.00
	Actual	1.00		2.06	0.94 ^b	0.99	1.10								1.64	0.92			1.27 ^c

^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: 27 APR 2011

Signature: *Dorothy C. Young*

Title: Technical Manager, BEI Authentication or designee

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