

Peptide Array, Influenza Virus A/New York/348/03 (H1N1) Nucleocapsid Protein

Catalog No. NR-2611

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Product Description: An 82-peptide array spanning the nucleocapsid protein (NP) of the A/New York/348/03 (H1N1) strain of influenza virus (GenBank: ABA12733). Peptides are 13- to 17-mers, with 11 or 12 amino acid overlaps.

Lot: N31-1 to N31-82

The following information applies to all eight-two 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 82	1/30/2006	17	1 MASQGTKRSYEQMETDG 17	1919.09	-1.49	97.2%	74.0%
2 of 82	1/30/2006	17	7 KRSYEQMETDGERQNAT 23	2043.17	-2.21	96.2%	81.0%
3 of 82	1/30/2006	17	13 METDGERQNATEIRASV 29	1907.06	-1.08	99.6%	81.0%
4 of 82	1/30/2006	17	19 RQNATEIRASVGRMIGG 35	1816.09	-0.47	99.6%	75.0%
5 of 82	1/30/2006	17	25 IRASVGRMIGGIGRFYI 41	1866.28	0.68	99.6%	77.0%
6 of 82	1/30/2006	17	31 RMIGGIGRFYIQMCTEL 47	1988.44	0.42	86.2%	84.0%
7 of 82	1/30/2006	17	37 GRFYIQMCTELKLNLDYE 53	2123.45	-0.61	92.5%	79.0%
8 of 82	1/30/2006	17	43 MCTELKLNLDYEGRLIQN 59	2040.36	-0.68	95.0%	79.0%
9 of 82	1/30/2006	17	49 LNDYEGRLIQNSLTIER 65	2034.27	-0.75	97.6%	79.0%
10 of 82	1/30/2006	17	55 RLIQNSLTIERMVLSAF 71	1991.40	0.55	99.1%	81.0%
11 of 82	1/30/2006	17	61 LTIERMVLSAFDERRNK 77	2078.44	-0.59	98.4%	72.0%
12 of 82	1/30/2006	17	67 VLSAFDERRNKYLEEHP 83	2103.34	-1.23	99.9%	78.0%
13 of 82	1/30/2006	17	73 ERRNKYLEEHPKAGKDP 89	2026.21	-2.21	99.9%	73.0%
14 of 82	1/30/2006	17	79 LEEHPKAGKDPKKTGGP 95	1747.94	-1.61	82.0%	79.0%
15 of 82	1/30/2006	17	85 AGKDPKKTGGPIYKRV 101	1830.13	-1.35	94.6%	74.0%
16 of 82	1/30/2006	17	91 KTGPIYKRVVVGKVVRE 107	1989.33	-1.21	99.7%	72.0%
17 of 82	1/30/2006	17	97 YKRVVVGKVVRELVLYDK 113	2167.56	-0.88	99.9%	71.0%
18 of 82	1/30/2006	17	103 KVVRELVLYDKKEIRRI 119	2245.67	-0.74	99.7%	77.0%
19 of 82	1/30/2006	17	109 VLYDKKEIRRIWRQANN 125	2203.51	-1.28	99.9%	80.0%
20 of 82	1/30/2006	17	115 EIRRIWRQANNGGDDATA 131	1986.15	-1.30	99.6%	77.0%
21 of 82	1/30/2006	17	121 RQANNGGDDATAGLTHIM 137	1784.94	-0.69	99.5%	75.0%
22 of 82	1/30/2006	17	127 DDATAGLTHIMIWHSNL 143	1895.14	0.10	99.4%	79.0%
23 of 82	1/30/2006	17	133 LTHIMIWHSNLNDTTYQ 149	2087.36	-0.41	99.5%	78.0%
24 of 82	1/30/2006	17	139 WHSNLNDTTYQRTALV 155	2075.29	-1.04	99.9%	76.0%
25 of 82	1/30/2006	17	145 DTTYQRTALVRTGMDP 161	1981.23	-1.08	91.2%	73.0%
26 of 82	1/30/2006	17	151 TRALVRTGMDPRMCSLM 167	1938.40	0.04	95.9%	73.0%
27 of 82	1/30/2006	17	157 TGMDPRMCSLMQGSTLP 173	1825.19	-0.16	99.2%	79.0%
28 of 82	1/30/2006	17	163 MCSLMQGSTLPRRSGAA 179	1766.11	-0.03	83.2%	77.0%
29 of 82	1/30/2006	17	169 GSTLPRRSGAAGAAVKG 185	1555.77	-0.19	99.6%	73.0%
30 of 82	1/30/2006	17	175 RSGAAGAAVKGVGTMLV 191	1544.85	0.82	95.9%	75.0%

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Peptide	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Hydrophilicity	Purity by HPLC ^a	Peptide Content ^b
31 of 82	1/30/2006	17	181 AAVKGVGTMVLELIRMI 197	1801.30	1.36	99.5%	81.0%
32 of 82	1/30/2006	17	187 GTMVLELIRMIKRGIND 203	1959.42	0.25	99.3%	75.0%
33 of 82	1/30/2006	17	193 LIRMIKRGINDRNFWRG 209	2145.58	-0.71	99.7%	78.0%
34 of 82	1/30/2006	17	199 RGINDRNFWRGENGRKT 215	2076.28	-2.05	99.9%	76.0%
35 of 82	1/30/2006	17	205 NFWRGENGRKTRIAYER 221	2153.41	-1.79	99.9%	73.0%
36 of 82	1/30/2006	17	211 NGRKTRIAYERMCNILK 227	2066.50	-0.89	99.9%	76.0%
37 of 82	1/30/2006	17	217 IAYERMCNILKGFQTA 233	1986.40	-0.09	99.6%	81.0%
38 of 82	1/30/2006	17	223 CNILKGFQTAQKAMM 239	1883.34	-0.03	99.3%	75.0%
39 of 82	1/30/2006	17	229 KFQTAQKAMMDQVRES 245	1969.29	-0.89	92.4%	72.0%
40 of 82	1/30/2006	17	234 AQKAMMDQVRESRNP 250	1932.18	-1.48	99.6%	72.0%
41 of 82	1/30/2006	17	240 DQVRESRNPNGAEIEDL 256	1942.04	-1.50	86.4%	79.0%
42 of 82	1/30/2006	17	246 RNPNGAEIEDLFLARS 262	1903.10	-0.68	95.5%	82.0%
43 of 82	1/30/2006	17	252 EIEDLFLARSALILRG 268	1917.25	0.54	95.3%	75.0%
44 of 82	1/30/2006	17	258 FLARSALILRGSVAHKS 274	1826.19	0.55	98.5%	77.0%
45 of 82	1/30/2006	17	264 LILRGSVAHKSCLPACV 280	1767.20	1.04	97.9%	80.0%
46 of 82	1/30/2006	17	270 VAHKSCLPACVYGPAVA 286	1686.04	0.93	99.8%	79.0%
47 of 82	1/30/2006	17	276 LPACVYGPVAVASGYDFE 292	1758.98	0.50	99.8%	84.0%
48 of 82	1/30/2006	17	282 GPVAVASGYDFEKEGYSL 298	1789.93	-0.41	82.8%	86.0%
49 of 82	1/30/2006	17	288 GYDFEKEGYSLVGVDPF 304	1922.09	-0.37	98.6%	80.0%
50 of 82	1/30/2006	17	294 EGYSLVGVDPFKLLQTS 310	1853.12	0.13	96.8%	84.0%
51 of 82	1/30/2006	17	300 GVDPFKLLQTSQVYSLI 316	1908.24	0.42	99.6%	84.0%
52 of 82	1/30/2006	17	306 LLQTSQVYSLIRPNENP 322	1972.25	-0.51	86.1%	80.0%
53 of 82	1/30/2006	17	312 VYSLIRPNENPAHKSQ 328	1966.24	-0.80	98.5%	78.0%
54 of 82	1/30/2006	17	318 PNENPAHKSQVWVWV 334	1939.22	-0.79	99.0%	84.0%
55 of 82	1/30/2006	17	324 HKSQVWVWVWVWVWV 340	1937.20	-0.18	95.6%	80.0%
56 of 82	1/30/2006	17	330 WVWVWVWVWVWVWV 346	1934.20	0.30	96.6%	79.0%
57 of 82	1/30/2006	17	336 AAFEDLRVSSFI 352	1924.21	0.16	99.5%	84.0%
58 of 82	1/30/2006	17	342 RVSSFI 358	1942.36	-0.19	99.7%	73.0%
59 of 82	1/30/2006	17	348 RGVTRV 364	1881.23	-0.85	93.1%	75.0%
60 of 82	1/30/2006	17	354 PRGKLSTRGVQ 370	1827.05	-1.02	96.6%	79.0%
61 of 82	1/30/2006	17	360 TRGVQ 376	1805.01	-0.11	96.9%	85.0%
62 of 82	1/30/2006	17	366 ASNENMDAIVS 382	1850.05	-0.19	97.9%	77.0%
63 of 82	1/30/2006	17	372 DAIVS 388	1980.27	0.18	95.4%	85.0%
64 of 82	1/30/2006	17	378 TLELRSRYW 394	2022.31	-0.80	99.7%	75.0%
65 of 82	1/30/2006	17	384 RYWAIRTRSGG 400	2064.27	-1.82	99.3%	76.0%
66 of 82	1/30/2006	17	390 TRSGGNTNQ 406	1745.84	-1.33	95.3%	78.0%
67 of 82	1/30/2006	17	396 TNQQRASAG 412	1834.98	-0.99	98.2%	82.0%
68 of 82	1/30/2006	17	402 SAGQISTQPT 418	1834.03	-0.42	99.7%	81.0%
69 of 82	1/30/2006	17	408 TQPTFSVQR 424	1980.23	-0.92	99.9%	83.0%
70 of 82	1/30/2006	17	414 VQRNLPFDK 430	1953.31	0.06	82.6%	76.0%
71 of 82	1/30/2006	17	420 FDKTTIMA 436	1860.09	-0.41	93.5%	73.0%
72 of 82	1/30/2006	17	426 MAAFTGN 442	1816.02	-0.66	97.9%	79.0%
73 of 82	1/30/2006	17	432 NTEGRTSD 448	1983.33	-0.76	99.1%	79.0%
74 of 82	1/30/2006	17	438 SDMRAE 454	1994.35	-0.69	99.2%	78.0%
75 of 82	1/30/2006	17	444 IIKMMES 460	1952.30	-0.26	98.8%	78.0%
76 of 82	1/30/2006	17	450 SARPEEVS 466	1908.12	-0.44	88.7%	82.0%
77 of 82	1/30/2006	17	456 VSFQGRG 472	1898.08	-0.38	99.7%	80.0%
78 of 82	1/30/2006	17	462 VGFELSD 478	1830.03	-0.18	96.6%	83.0%
79 of 82	1/30/2006	17	468 DERATNPI 484	1922.07	-0.93	99.8%	81.0%
80 of 82	1/30/2006	17	474 PIVPSFD 490	1894.11	0.05	91.4%	83.0%
81 of 82	1/30/2006	17	480 DMSNEGSY 496	1975.00	-1.19	84.8%	85.0%
82 of 82	1/30/2006	13	486 SYFFGDNA 498	1570.56	-1.34	91.6%	83.0%

^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 82	Expected	1.00	1.00	1.00		4.00	2.00				1.00	2.00			2.00	2.00		1.00	
	Actual	1.01	0.85	0.93		3.93	1.99				0.92	1.86			1.89	1.80		0.98	
2 of 82	Expected	1.00	2.00	2.00		5.00	1.00				1.00	1.00			1.00	2.00		1.00	
	Actual	1.10	2.00	1.96		4.84	0.96				0.81	0.99			0.88	1.85		1.02	
3 of 82	Expected	2.00	2.00	2.00		4.00	1.00		1.00			1.00			1.00	2.00			1.00
	Actual	1.94	2.02	1.83		3.71	0.96		0.85			1.04			0.80	1.84			1.00
4 of 82	Expected	2.00	3.00	1.00		2.00	3.00		2.00			1.00			1.00	1.00			1.00
	Actual	1.88	2.87	1.00		1.99	2.87		1.87			0.99			0.89	0.87			0.88
5 of 82	Expected	1.00	3.00				4.00		4.00			1.00	1.00		1.00				1.00
	Actual	0.98	2.93				3.96		3.86			1.10	1.00		0.92				1.00
6 of 82	Expected		2.00		1.00	2.00	3.00		3.00	1.00		2.00	1.00			1.00			1.00
	Actual		1.88		0.55 ^a	1.90	2.95		2.87	1.00		1.80	1.05			0.84			1.03
7 of 82	Expected		1.00	2.00	1.00	3.00	1.00		1.00	2.00	1.00	1.00	1.00			1.00			2.00
	Actual		1.14	1.98	0.52 ^a	2.91	1.11		0.86	2.03	0.96	0.93	1.04			0.96			2.00
8 of 82	Expected		1.00	3.00	1.00	3.00	1.00		1.00	3.00	1.00	1.00				1.00			1.00
	Actual		1.12	3.00	0.68 ^a	2.85	1.01		0.88	2.84	0.96	1.10				0.88			0.97
9 of 82	Expected		2.00	3.00		3.00	1.00		2.00	3.00					1.00	1.00			1.00
	Actual		1.88	2.94		2.90	1.06		1.89	2.87					0.96	0.81			0.98
10 of 82	Expected	1.00	2.00	1.00		2.00			2.00	3.00		1.00	1.00			2.00	1.00		1.00
	Actual	0.85	2.05	0.99		1.91			1.85	2.88		1.03	1.00			1.95	0.89		0.82
11 of 82	Expected	1.00	3.00	2.00		2.00			1.00	2.00	1.00	1.00	1.00			1.00	1.00		1.00
	Actual	1.01	3.00	1.89		1.96			0.81	1.82		1.06	1.09			0.91	0.96		0.89
12 of 82	Expected	1.00	2.00	2.00		3.00		1.00		2.00	1.00			1.00	1.00				1.00
	Actual	0.86	1.95	1.80		2.85		0.92		1.79	0.89		0.95	0.98	0.84				0.90
13 of 82	Expected	1.00	2.00	2.00		3.00	1.00	1.00		1.00	2.00			2.00	1.00				1.00
	Actual	0.95	1.94	1.91		2.85	0.96	0.93		0.88	1.94			2.04	0.85				0.93
14 of 82	Expected	1.00		1.00		2.00	3.00	1.00		1.00	3.00			3.00	1.00	1.00			
	Actual	1.01		0.95		1.91	3.05	1.09		1.11	2.86			3.00	1.05	0.91			
15 of 94	Expected	1.00	1.00	2.00			3.00		1.00		4.00			2.00		1.00			1.00
	Actual	1.03	1.05	2.02			3.11		0.92		3.94			2.02		0.88			0.96
16 of 82	Expected		2.00	1.00		1.00	3.00		1.00		3.00			1.00		1.00	1.00	1.00	2.00
	Actual		2.03	0.94		1.00	2.99		0.93		2.99			1.16		0.85	0.00 ^b	0.81	1.89
17 of 82	Expected		2.00	2.00		1.00	1.00			2.00	3.00							1.00	2.00
	Actual		2.03	1.95		0.98	1.00			1.95	2.85							0.00 ^b	2.00
18 of 82	Expected		3.00	1.00		3.00			2.00	2.00	2.00							1.00	1.00
	Actual		3.00	0.99		2.86			1.90	1.85	1.93							0.00 ^b	1.00
19 of 82	Expected	1.00	3.00	3.00		3.00			2.00	1.00	1.00							1.00	1.00
	Actual	1.00	3.06	2.95		3.01			1.83	0.88	0.98							0.00 ^b	1.07
20 of 82	Expected	3.00	3.00	4.00		2.00	1.00		2.00							1.00	1.00		
	Actual	3.00	3.03	3.85		1.94	1.03		1.99							0.87	0.00 ^b		
21 of 82	Expected	3.00	1.00	4.00		1.00	2.00	1.00	1.00	1.00		1.00				2.00			
	Actual	3.02	1.05	3.93		1.09	2.11	1.03	0.96	1.10		1.00				1.82			
22 of 82	Expected	2.00		3.00			1.00	2.00	2.00	2.00		1.00			1.00	2.00	1.00		
	Actual	1.85		2.88			0.92	1.89	1.80	1.81		0.86			0.94	1.81	0.00 ^b		
23 of 82	Expected			3.00		1.00		2.00	2.00	2.00		1.00			1.00	3.00	1.00	1.00	
	Actual			2.85		0.93		2.01	1.87	1.86		0.88			0.85	2.87	0.00 ^b	1.13	
24 of 82	Expected	1.00	2.00	3.00		1.00		1.00		2.00					1.00	3.00	1.00	1.00	1.00
	Actual	0.90	2.00	2.87		0.87		0.83		1.89					0.88	2.84	0.00 ^b	1.05	0.90
25 of 82	Expected	1.00	3.00	2.00		1.00	1.00			1.00		1.00		1.00		4.00		1.00	1.00
	Actual	0.90	2.80	1.92		0.89	0.88			0.84		0.81		0.98		3.89		0.96	0.85
26 of 82	Expected	1.00	3.00	1.00	1.00		1.00			2.00	3.00	1.00	1.00	1.00	1.00	2.00			1.00
	Actual	1.16	3.03	1.16	0.59 ^a		1.11			1.87	3.00				0.91	1.98			0.97
27 of 82	Expected		1.00	1.00	1.00	1.00	2.00			2.00	3.00			2.00	2.00	2.00			
	Actual		1.12	0.93	0.53 ^a	1.00	1.91			1.87	2.65			2.01	1.80	1.85			
28 of 82	Expected	2.00	2.00		1.00	1.00	2.00			2.00		2.00		1.00	3.00	1.00			
	Actual	1.86	2.08		0.49 ^a	1.02	2.00			1.89		2.04		1.01	2.80	0.83			
29 of 82	Expected	4.00	2.00				4.00			1.00	1.00			1.00	2.00	1.00			1.00
	Actual	3.98	2.09				3.98			0.89	0.88			0.97	1.85	0.81			0.83
30 of 82	Expected	4.00	1.00				4.00			1.00	1.00	1.00			1.00	1.00			3.00
	Actual	3.93	1.05				3.92			0.85	0.87	0.82			0.89	0.92			2.84

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)
31 of 82	Expected	2.00	1.00			1.00	2.00		2.00	2.00	1.00	2.00				1.00			3.00
	Actual	2.00	1.03			0.91	1.93		1.88	1.89	0.93	1.86				0.84			2.89
32 of 82	Expected		2.00	2.00		1.00	2.00		3.00	2.00	1.00	2.00				1.00			1.00
	Actual		1.96	1.95		0.94	2.04		2.81	1.89	1.03	1.36				0.92			0.83
33 of 82	Expected		4.00	3.00			2.00		3.00	1.00	1.00	1.00	1.00				1.00		
	Actual		3.92	2.91			1.93		2.80	0.99	0.95	1.04	0.96				0.00 ^b		
34 of 82	Expected		4.00	4.00		1.00	3.00		1.00		1.00		1.00			1.00	1.00		
	Actual		3.91	3.83		0.99	2.82		0.94		0.91		0.95			0.84	0.00 ^b		
35 of 82	Expected	1.00	4.00	2.00		2.00	2.00		1.00		1.00		1.00			1.00	1.00	1.00	
	Actual	0.91	3.90	1.88		1.81	1.92		1.01		0.84		0.97			0.91	0.00 ^b	1.04	
36 of 82	Expected	1.00	3.00	2.00	1.00	1.00	1.00		2.00	1.00	2.00	1.00				1.00			1.00
	Actual	1.05	3.05	2.00	0.57 ^a	1.13	1.03		1.81	0.84	1.92	1.14				0.86		1.15	
37 of 82	Expected	2.00	1.00	1.00	1.00	2.00	1.00		2.00	1.00	2.00	1.00	1.00			1.00		1.00	
	Actual	1.92	1.06	1.03	0.60 ^a	2.00	1.09		1.87	0.86	1.92	1.01	0.97			0.87		1.03	
38 of 82	Expected	3.00		1.00	1.00	2.00	1.00		1.00	1.00	3.00	2.00	1.00			1.00			
	Actual	3.00		0.93	0.45 ^a	1.90	1.10		0.87	0.80	2.93	1.86	0.93			0.88			
39 of 82	Expected	3.00	1.00	1.00		4.00					2.00	2.00	1.00		1.00	1.00			1.00
	Actual	2.96	0.89	1.00		3.95					1.88	1.84	0.79		0.81	0.82			0.92
40 of 82	Expected	2.00	2.00	3.00		3.00	1.00				1.00	2.00		1.00	1.00				1.00
	Actual	2.08	1.81	2.88		2.92	0.95				1.07	2.04		0.88	0.89				0.81
41 of 82	Expected	1.00	2.00	4.00		4.00	1.00		1.00	1.00				1.00	1.00				1.00
	Actual	0.93	1.87	4.02		3.91	1.04		0.89	0.94				0.98	0.91				0.96
42 of 82	Expected	2.00	2.00	3.00		2.00	1.00		1.00	2.00			1.00	1.00	1.00	1.00			
	Actual	2.04	2.00	3.09		1.91	1.06		0.89	1.91			0.97	1.06	0.92	0.89			
43 of 82	Expected	2.00	2.00	1.00		2.00	1.00		2.00	4.00			1.00		1.00	1.00			
	Actual	1.88	1.96	0.97		1.92	1.00		1.89	3.89			0.91		0.94	0.89			
44 of 82	Expected	3.00	2.00				1.00	1.00	1.00	3.00	1.00		1.00		3.00				1.00
	Actual	2.99	2.10				1.09	1.06	0.86	2.87	0.87		0.95		2.90				0.83
45 of 82	Expected	2.00	1.00		2.00		1.00	1.00	1.00	3.00	1.00			1.00	2.00				2.00
	Actual	2.00	1.14		0.98 ^a		1.05	1.09	0.84	2.87	1.01			1.04	1.90				1.94
46 of 82	Expected	4.00			2.00		1.00	1.00		1.00	1.00			2.00	1.00			1.00	3.00
	Actual	4.00			0.97 ^a		1.10	1.06		1.11	1.10			2.15	0.87			1.05	2.81
47 of 82	Expected	3.00		1.00	1.00	1.00	2.00			1.00			1.00	2.00	1.00			2.00	2.00
	Actual	2.82		0.97	0.63 ^a	1.00	1.99			0.86			1.02	1.99	0.92			1.91	1.83
48 of 82	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		1.01		1.92	3.06			0.97	0.84		1.04	1.01	0.89			2.08	0.82
49 of 82	Expected			2.00		2.00	3.00			1.00	1.00		2.00	1.00	1.00			2.00	2.00
	Actual			1.94		1.99	2.97			0.87	0.97		1.94	1.02	0.92			2.08	1.81
50 of 82	Expected			1.00		2.00	2.00			3.00	1.00		1.00	1.00	2.00	1.00		1.00	2.00
	Actual			0.92		2.03	1.89			2.83	0.96		1.08	1.07	1.94	0.91		1.05	1.88
51 of 82	Expected			1.00		2.00	1.00		1.00	3.00	1.00		1.00	1.00	2.00	1.00		1.00	2.00
	Actual			0.92		1.98	1.01		1.03	2.81	1.12		1.14	1.08	1.81	0.83		0.86	1.88
52 of 82	Expected		1.00	2.00		3.00			1.00	3.00				2.00	2.00	1.00		1.00	1.00
	Actual		0.84	2.00		2.92			0.80	2.79				2.17	1.89	0.83		0.88	0.86
53 of 82	Expected	1.00	1.00	2.00		2.00		1.00	1.00	2.00	1.00			2.00	2.00			1.00	1.00
	Actual	1.08	0.91	2.02		2.00		1.08	0.91	1.88	1.04			2.01	1.91			0.93	0.89
54 of 82	Expected	2.00		3.00	1.00	2.00		1.00		1.00	1.00	1.00		2.00	1.00		1.00		1.00
	Actual	2.11		2.92	0.48 ^a	2.14		1.14		1.05	0.89	1.10		2.14	0.94		0.00 ^b		0.91
55 of 82	Expected	3.00		2.00	1.00	2.00		1.00		1.00	1.00	1.00	1.00		2.00		1.00		1.00
	Actual	3.04		1.91	0.53 ^a	1.87		0.97		0.86	0.93	1.01	1.05		1.91		0.00 ^b		0.84
56 of 82	Expected	3.00	1.00	2.00	1.00	1.00				1.00		1.00	2.00		3.00		1.00		1.00
	Actual	3.07	1.03	2.10	0.48 ^a	1.04				0.93		0.97	1.87		2.92		0.00 ^b		0.86
57 of 82	Expected	2.00	3.00	1.00		1.00	1.00		1.00	1.00			2.00		2.00	1.00			2.00
	Actual	2.00	3.15	0.92		0.98	1.00		0.89	0.92			2.00		1.91	0.89			2.00
58 of 82	Expected		4.00				2.00		1.00	2.00	1.00		1.00	1.00	2.00	1.00			2.00
	Actual		4.04				2.06		0.88	1.85	1.00		1.02	1.09	1.87	0.89			1.85
59 of 82	Expected		4.00			1.00	3.00			2.00	1.00			1.00	1.00	2.00			2.00
	Actual		4.04			1.00	3.02			1.86	1.10			1.11	0.87	1.89			1.83
60 of 82	Expected	1.00	2.00	2.00		2.00	2.00		1.00	1.00	1.00			1.00	2.00	1.00			1.00
	Actual	1.06	2.01	2.00		1.85	1.89		1.07	1.01	0.90			1.00	1.87	0.82			0.93

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 82	Expected	2.00	1.00	3.00		2.00	1.00		2.00			1.00			2.00	1.00			2.00
	Actual	2.06	1.05	3.01		1.92	1.03		1.53 ^c			1.11			1.84	0.89			1.02 ^c
62 of 82	Expected	2.00	1.00	3.00		2.00			1.00	2.00		1.00			3.00	1.00			1.00
	Actual	2.05	1.00	3.02		2.03			0.49 ^c	1.97		1.05			2.82	0.86			0.57 ^c
63 of 82	Expected	2.00	2.00	1.00		1.00			2.00	2.00					3.00	1.00	1.00	1.00	1.00
	Actual	2.00	2.07	0.95		1.01			1.51 ^c	2.01					2.87	0.85	0.00 ^b	1.01	0.52 ^c
64 of 82	Expected	1.00	4.00			1.00	2.00		1.00	2.00					2.00	2.00	1.00	1.00	
	Actual	1.12	4.05			1.13	1.93		0.80	2.08					1.82	1.84	0.00 ^b	1.11	
65 of 82	Expected	1.00	4.00	2.00		2.00	2.00		1.00						1.00	2.00	1.00	1.00	
	Actual	1.01	3.96	1.93		2.00	1.94		0.83						0.90	1.82	0.00 ^b	0.86	
66 of 82	Expected	2.00	2.00	2.00		3.00	3.00		1.00						2.00	2.00			
	Actual	2.01	2.04	1.85		3.00	2.99		0.91						1.89	1.87			
67 of 82	Expected	2.00	1.00	1.00		4.00	1.00		1.00				1.00	1.00	2.00	3.00			
	Actual	2.10	1.11	0.97		3.92	1.03		1.03				1.00	1.05	1.87	2.81			
68 of 82	Expected	1.00	1.00	1.00		3.00	1.00		1.00	1.00			1.00	1.00	3.00	2.00			1.00
	Actual	1.03	1.06	0.97		2.88	1.09		0.85	1.00			0.96	1.04	2.91	1.88			
69 of 82	Expected		1.00	2.00		2.00				1.00	1.00		2.00	2.00	1.00	4.00			1.00
	Actual		1.02	2.00		1.91				1.07	1.00		2.11	2.04	0.92	3.83			0.85
70 of 82	Expected	2.00	1.00	2.00		1.00			1.00	1.00	1.00	1.00	2.00	1.00		3.00			1.00
	Actual	2.05	1.01	1.83		0.88			0.89	0.97	1.06	0.91	1.92	1.02		2.85			0.82
71 of 82	Expected	2.00	1.00	2.00		1.00	2.00		1.00		1.00	1.00	2.00			4.00			
	Actual	1.97	1.00	2.00		0.95	1.94		0.84		1.04	1.01	2.03			3.82			
72 of 82	Expected	3.00	2.00	2.00		1.00	2.00					2.00	1.00		1.00	3.00			
	Actual	3.00	1.94	2.05		0.93	2.09					2.00	1.03		0.91	2.87			
73 of 82	Expected	1.00	2.00	2.00		2.00	1.00		2.00		1.00	3.00			1.00	2.00			
	Actual	1.06	2.07	2.03		2.00	1.15		0.95 ^c		0.89	2.74			0.93	1.84			
74 of 82	Expected	2.00	2.00	1.00		3.00			2.00			1.00	3.00		1.00	2.00			
	Actual	2.09	1.97	1.00		3.00			1.02 ^c		0.91	2.75		1.00	1.85				
75 of 82	Expected	1.00	1.00			4.00	1.00		2.00		1.00	2.00	1.00	1.00	2.00				1.00
	Actual	1.11	1.05			4.00	0.89		0.98 ^c		0.91	2.11	1.08	1.01	1.81				1.07
76 of 82	Expected	1.00	2.00			4.00	2.00			1.00			2.00	1.00	2.00				2.00
	Actual	1.05	2.15			4.04	2.15			1.00			1.83	1.01	1.81				1.89
77 of 82	Expected	1.00	2.00	1.00		3.00	2.00			1.00			2.00		2.00	1.00			2.00
	Actual	1.00	2.08	1.10		3.06	2.18			1.06			1.91		1.94	0.88			1.83
78 of 82	Expected	1.00	1.00	2.00		2.00	1.00		1.00	1.00			1.00	2.00	2.00	1.00			2.00
	Actual	1.01	1.04	2.00		2.00	1.03		0.62 ^c	1.04			0.91	2.09	1.84	0.83			1.05 ^b
79 of 82	Expected	1.00	1.00	4.00		2.00			1.00			1.00	1.00	2.00	2.00	1.00			1.00
	Actual	1.02	1.08	4.02		1.95			0.51 ^c			1.09	1.08	2.07	1.91	0.87			0.49 ^b
80 of 82	Expected			2.00		1.00	2.00		1.00			1.00	3.00	2.00	3.00			1.00	1.00
	Actual			2.03		1.06	2.00		0.57 ^c			1.02	2.84	2.04	2.89			1.01	0.51 ^b
81 of 82	Expected	1.00		4.00		3.00	2.00					1.00	2.00		2.00				2.00
	Actual	1.05		3.86		3.00	2.11					1.00	1.91		1.92				2.03
82 of 82	Expected	1.00		4.00		2.00	1.00						2.00		1.00				2.00
	Actual	1.03		3.90		1.93	1.03						1.95		0.92				1.97

^aTrp was completely destroyed during hydrolysis

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

^cCys was partially destroyed during hydrolysis

Date: 09 JUN 2014

Signature: *Dorothy C. Young*

Title: Technical Manager, BEI Authentication or designee

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