

Peptide Array, Influenza Virus A/New Caledonia/20/1999 (H1N1) Hemagglutinin Protein

Catalog No. NR-2602

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Product Description: The 94-peptide array spans the hemagglutinin (HA) protein of the A/New Caledonia/20/1999 (H1N1) strain of influenza virus (GenPept: ABF21272). Peptides are 16- to 17-mers, with 11 or 12 amino acid overlaps.

Lot: 332944 to 333037

The following information applies to all peptides:

- Appearance Off-white lyophilized powder (Peptide 74)
White lyophilized powder (All other peptides)
- 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 94	03/08/06	17	1 MKAKLLVLLCTFTATYA 17	1887.4	63.8%	67.0%
2 of 94	03/06/06	17	7 VLLCTFTATYADTICIG 23	1805.1	83.7%	73.8%
3 of 94	08/26/11	17	13 TATYADTICIGYHANN 29	1815.0	84.5%	79.4%
4 of 94	02/03/06	17	19 TICIGYHANNSTDTVDT 35	1824.9	93.8%	81.8%
5 of 94	02/27/06	17	25 HANNSTDTVDTVLEKNV 41	1857.0	94.0%	79.4%
6 of 94	09/01/11	17	31 DTVDTVLEKNVTVTHSV 47	1857.1	92.8%	82.7%
7 of 94	02/11/06	17	37 LEKNVTVTHSVNLLDS 53	1898.1	93.7%	78.8%
8 of 94	02/10/06	16	43 VTHSVNLLEDSHNGKL 58	1762.9	91.0%	76.6%
9 of 94	08/29/11	17	48 NLLEDSHNGKLCLLKI 64	1867.2	94.4%	75.3%
10 of 94	02/01/06	17	54 HNGKLCLLKIAPLQLG 70	1775.2	92.5%	74.9%
11 of 94	08/29/11	17	60 LLKIAPLQLGNCSVAG 76	1654.0	81.1%	83.8%
12 of 94	03/08/06	17	66 PLQLGNCSVAGWILGNP 82	1739.0	83.9%	89.2%
13 of 94	08/31/11	17	72 CSVAGWILGNPECELLI 88	1817.2	86.5%	87.9%
14 of 94	08/29/11	17	78 ILGNPECELLISKESWS 94	1918.2	88.3%	81.6%
15 of 94	09/05/11	17	84 CELLISKESWSYIVETP 100	1997.3	58.1%	88.6%
16 of 94	02/01/06	17	90 KESWSYIVETPNPENG 106	1951.1	97.7%	86.5%
17 of 94	02/01/06	17	96 IVETPNPENGTCYPGYF 112	1901.1	91.6%	85.3%
18 of 94	02/02/06	17	102 PENGTCYPGYFADYEEL 118	1968.1	86.2%	87.7%
19 of 94	02/01/06	17	108 YPGYFADYEELREQLSS 124	2067.2	88.7%	85.2%
20 of 94	02/08/06	17	114 DYEELREQLSSVSSFER 130	2074.2	93.6%	78.0%

Table 1						
Peptide	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Purity by HPLC ^a	Peptide Content ^b
21 of 94	08/24/11	17	120 EQLSSVSSFERFEIFPK 136	2030.3	95.6%	78.4%
22 of 94	02/17/06	17	126 SSFERFEIFPKESSWPN 142	2087.3	86.1%	79.1%
23 of 94	02/08/06	17	132 EIFPKESSWPNHTVTGV 148	1928.1	96.6%	77.7%
24 of 94	08/26/11	17	138 SSWPNHTVTGVSASCSH 154	1756.9	92.5%	75.5%
25 of 94	02/13/06	17	144 TVTGVASCSHNGKSSF 160	1668.8	82.4%	75.9%
26 of 94	02/09/06	17	150 ASCSHNGKSSFYRNLLW 166	1970.2	90.2%	75.2%
27 of 94	08/22/11	17	156 GKSSFYRNLLWLTGKNG 172	1941.2	93.9%	71.3%
28 of 94	02/11/06	17	162 RNLLWLTGKNGLYPNLS 178	1959.3	93.7%	79.8%
29 of 94	08/24/11	17	168 TGKNGLYPNLSKSYVNN 184	1869.1	84.2%	78.6%
30 of 94	02/08/06	17	174 YPNLSKSYVNNKEKEVL 190	2025.3	92.2%	77.1%
31 of 94	03/06/06	17	180 SYVNNKEKEVLVLWGVH 196	2014.3	97.0%	77.4%
32 of 94	02/10/06	17	186 KEVLVLWGVHHPNIG 202	1924.2	95.8%	76.4%
33 of 94	02/03/06	17	192 LWGVHHPNIGNQRALY 208	1972.2	93.7%	73.9%
34 of 94	02/02/06	17	198 PPNIGNQRALYHTENAY 214	1958.1	91.6%	75.0%
35 of 94	02/08/06	17	203 NQRALYHTENAYVSVVS 219	1951.1	80.0%	81.1%
36 of 94	02/11/06	17	209 HTENAYVSVVSSHYSRR 225	1992.1	94.0%	81.3%
37 of 94	02/08/06	17	215 VSVVSSHYSRRFTPEIA 231	1935.2	97.6%	73.4%
38 of 94	02/15/06	17	221 HYSRRFTPEIAKRPKVR 237	2141.5	96.5%	65.7%
39 of 94	02/08/06	17	227 TPEIAKRPKVRDQEGRI 243	1993.3	89.9%	70.5%
40 of 94	02/11/06	17	233 RPKVRDQEGRINYWTL 249	2194.5	94.7%	75.8%
41 of 94	02/22/06	17	238 DQEGRINYWTLLEPGD 254	2069.2	89.8%	82.0%
42 of 94	03/01/06	17	244 NYYWTLLEPGDTIIFEA 260	2045.3	95.1%	84.6%
43 of 94	03/01/06	17	250 LEPGDTIIFANGNLIA 266	1787.0	86.9%	72.0%
44 of 94	02/15/06	17	256 IIFANGNLIAPWYafa 272	1910.2	83.0%	86.6%
45 of 94	02/26/06	17	262 GNLIAPWYAFALSRGFG 278	1840.1	83.3%	84.1%
46 of 94	03/01/06	17	268 WYAFALSRGFGSGIITS 284	1833.1	85.4%	86.0%
47 of 94	02/15/06	17	274 SRGFGSGIITSNAPMDE 290	1738.9	93.2%	82.7%
48 of 94	02/15/06	17	280 GIITSNAPMDECDKQCQ 296	1796.0	86.3%	82.7%
49 of 94	02/15/06	17	286 APMDECDKQCQTPQGAI 302	1778.0	92.1%	86.1%
50 of 94	02/16/06	17	292 DAKCQTPQGAINSSLPF 308	1777.0	86.0%	76.5%
51 of 94	02/22/06	17	298 PQGAINSSLPFQNVHPV 314	1805.0	94.9%	82.6%
52 of 94	02/21/06	17	304 SSLPFQNVHPVTIGCEP 320	1825.1	94.5%	82.7%
53 of 94	02/21/06	17	310 NVHPVTIGCEPKYVRSa 326	1870.2	89.6%	78.4%
54 of 94	02/22/06	17	316 IGCEPKYVRSAKLRMVT 332	1951.4	87.6%	72.8%
55 of 94	08/29/11	17	322 YVRSAKLRMVTGLRNIP 338	1974.4	90.4%	69.3%
56 of 94	02/15/06	17	328 LRMVTGLRNIPSISQSRG 344	1898.3	82.3%	73.9%
57 of 94	02/21/06	17	334 LRNIPSISQRGLFGAIA 350	1813.1	85.7%	82.9%
58 of 94	08/22/11	17	340 IQSRGLFGAIAGFIEGG 356	1693.0	86.0%	79.9%
59 of 94	08/31/11	17	346 FGAIAGFIEGGWTGMVD 362	1728.0	84.7%	85.5%
60 of 94	08/26/11	17	352 FIEGGWTGMVDGWYGYH 368	1975.2	97.2%	81.8%

Table 1						
Peptide	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Purity by HPLC ^a	Peptide Content ^b
61 of 94	02/07/06	17	358 TGMVDGWYGYHHQNEQG 374	1979.1	86.3%	79.3%
62 of 94	02/23/06	17	364 WYGYHHQNEQGSYAAD 380	1983.0	88.3%	79.6%
63 of 94	02/07/06	17	369 HQNEQGSYAADQKSTQ 385	1848.9	93.5%	84.2%
64 of 94	09/01/11	17	375 SGYAADQKSTQNAINGI 391	1737.9	85.9%	80.0%
65 of 94	02/09/06	17	380 DQKSTQNAINGITNKVN 396	1845.0	86.7%	78.9%
66 of 94	02/11/06	17	386 NAINGITNKVNSVIEKM 402	1845.2	81.7%	81.6%
67 of 94	08/31/11	17	392 TNKVNSVIEKMNTQFTA 408	1925.2	88.2%	78.2%
68 of 94	02/11/06	17	398 VIEKMNTQFTAVGKEFN 414	1956.3	85.9%	79.1%
69 of 94	02/10/06	17	404 TQFTAVGKEFNKLERRM 420	2055.4	92.8%	74.0%
70 of 94	02/10/06	17	410 GKEFNKLERRMENLNKK 426	2134.5	97.7%	63.3%
71 of 94	02/10/06	17	416 LERRMENLNKKVDDGFL 432	2077.4	86.4%	75.8%
72 of 94	02/13/06	17	422 NLNKKVDDGFLDIWTYN 438	2055.3	82.2%	76.1%
73 of 94	02/23/06	17	428 DDGFLDIWTYNAELLVL 444	1997.2	82.3%	88.3%
74 of 94	08/26/11	17	434 IWTYNAELLVLENERT 450	2077.4	81.2%	85.4%
75 of 94	08/24/11	17	440 ELLVLENERTLDFHDS 456	2043.3	83.5%	77.0%
76 of 94	02/13/06	17	446 ENERTLDFHDSNVKNLY 462	2094.2	92.9%	77.9%
77 of 94	02/15/06	17	452 DFHDSNVKNLYEKVKSQ 468	2051.2	93.4%	76.7%
78 of 94	02/15/06	17	458 VKNLYEKVKSQKNNAK 474	2004.4	94.8%	71.7%
79 of 94	02/15/06	16	464 KVKSQKNNAKEIGNG 479	1728.0	91.1%	69.9%
80 of 94	02/15/06	17	469 LKNNAKEIGNGCFEFYH 485	1984.2	94.1%	76.6%
81 of 94	02/24/06	16	475 EIGNGCFEFYHKCNNE 490	1904.1	80.0%	76.3%
82 of 94	08/19/11	17	480 CFEFYHKCNNECMESVK 496	2111.4	92.9%	76.3%
83 of 94	08/22/11	17	486 KCNNECMESVKNNGTYDY 502	1998.2	87.3%	82.5%
84 of 94	02/22/06	17	492 MESVKNNGTYDYPKYSEE 508	2040.2	89.6%	78.8%
85 of 94	02/21/06	17	498 GTYDYPKYSEESKLNRE 514	2079.2	86.0%	79.0%
86 of 94	02/21/06	17	504 KYSEESKLNREKIDGVK 520	2023.3	93.6%	73.1%
87 of 94	02/21/06	17	510 KLNREKIDGVKLESMGV 526	1916.3	92.9%	74.7%
88 of 94	02/23/06	17	516 IDGVKLESMGVYQILAI 532	1849.2	91.3%	86.4%
89 of 94	09/05/11	17	522 ESGVYQILAIYSTVAS 538	1832.1	97.7%	81.9%
90 of 94	03/06/06	17	527 YQILAIYSTVASSLVLL 543	1854.2	40.0%	62.2%
91 of 94	02/28/06	17	533 YSTVASSLVLLVSLGAI 549	1693.0	84.4%	84.0%
92 of 94	03/06/06	17	539 SLVLLVSLGAISFWMCS 555	1826.3	33.0%	86.6%
93 of 94	08/31/11	16	545 SLGAISFWMCSNGSLQ 560	1701.0	80.4%	84.4%
94 of 94	03/01/06	16	550 SFWMCSNGSLQCRICI 565	1848.2	47.6%	80.0%

^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 94	Expected	3.00			1.00					4.00	2.00	1.00	1.00			3.00		1.00	1.00
	Actual	3.00			0.00 ^a					3.80	1.88	1.04	0.86			2.63		0.93	0.91
2 of 94	Expected	2.00		1.00	2.00		1.00		2.00	2.00			1.00			4.00		1.00	1.00
	Actual	1.96		0.94	0.00 ^a		1.00		1.75	1.89			0.95			3.54		0.93	1.02
3 of 94	Expected	3.00		3.00	1.00		1.00	1.00	2.00						1.00	3.00		2.00	
	Actual	3.03		3.00	0.00 ^a		0.99	1.00	2.00						0.86	2.80		2.05	
4 of 94	Expected	1.00		4.00	1.00		1.00	1.00	2.00						1.00	4.00		1.00	1.00
	Actual	1.09		4.16	0.00 ^a		1.00	1.01	1.80						0.97	3.81		1.05	1.10
5 of 94	Expected	1.00		5.00		1.00		1.00		1.00	1.00				1.00	3.00			3.00
	Actual	1.00		5.06		1.08		1.00		0.90	1.06				0.85	2.65			3.00
6 of 94	Expected			3.00		1.00		1.00		1.00	1.00				1.00	4.00			5.00
	Actual			2.93		1.01		0.98		1.03	1.00				0.95	3.68			4.82
7 of 94	Expected			3.00		2.00		1.00		3.00	1.00				2.00	2.00			3.00
	Actual			3.01		2.00		1.04		3.05	0.99				1.86	1.67			3.19
8 of 94	Expected			3.00		1.00	1.00	2.00		3.00	1.00				2.00	1.00			2.00
	Actual			3.08		1.06	0.98	2.01		3.00	0.98				1.88	0.89			2.17
9 of 94	Expected			3.00	1.00	1.00	2.00	1.00	1.00	5.00	2.00				1.00				
	Actual			2.95	0.00 ^a	0.99	1.95	0.96	1.01	5.24	2.00				0.89				
10 of 94	Expected	1.00		1.00	1.00	1.00	3.00	1.00	1.00	5.00	2.00			1.00					
	Actual	1.05		0.99	0.00 ^a	1.00	2.99	0.97	1.00	5.01	1.95			1.07					
11 of 94	Expected	2.00		1.00	1.00	1.00	3.00		1.00	4.00	1.00			1.00	1.00				1.00
	Actual	1.98		0.95	0.00 ^a	1.09	3.00		0.98	4.36	1.02			1.02	0.86				0.95
12 of 94	Expected	1.00		2.00	1.00	1.00	3.00		1.00	3.00				2.00	1.00			1.00	1.00
	Actual	1.00		2.29	0.00 ^a	0.76 ^c	3.57		1.00	2.65				2.33	1.30			0.00 ^d	1.23
13 of 94	Expected	1.00		1.00	2.00	2.00	2.00		2.00	3.00				1.00	1.00			1.00	1.00
	Actual	0.98		1.00	0.00 ^a	2.06	1.98		1.82	3.08				0.95	0.86			0.00 ^b	1.00
14 of 94	Expected			1.00	1.00	3.00	1.00		2.00	3.00	1.00			1.00	3.00			1.00	
	Actual			0.92	0.00 ^a	3.03	0.96		1.83	3.00	1.02			0.87	2.71			0.00 ^b	
15 of 94	Expected				1.00	3.00			2.00	2.00	1.00			1.00	3.00	1.00	1.00	1.00	1.00
	Actual				0.00	3.00			1.35 ^c	1.79	0.87			1.07	2.67	0.98	0.00	0.93	0.68 ^c
16 of 94	Expected			2.00		3.00	1.00		1.00					2.00	2.00	2.00	1.00	1.00	1.00
	Actual			1.99		3.00	0.95		0.52 ^a		0.99			2.17	1.81	1.83	0.00 ^d	0.96	0.63 ^e
17 of 94	Expected			2.00	1.00	2.00	2.00		1.00				1.00	3.00		2.00		2.00	1.00
	Actual			1.98	0.00 ^a	2.00	2.02		0.29 ^a				0.96	3.23		1.65		2.01	0.30 ^e
18 of 94	Expected	1.00		2.00	1.00	3.00	2.00			1.00			1.00	2.00		1.00		3.00	
	Actual	1.02		1.99	0.00 ^a	2.88	2.02			1.00			0.97	2.02		0.71 ^b		2.93	
19 of 94	Expected	1.00	1.00	1.00		4.00	1.00			2.00			1.00	1.00	2.00			3.00	
	Actual	1.09	1.02	1.02		4.00	1.01			2.04			0.98	0.97	1.75			3.09	
20 of 94	Expected		2.00	1.00		5.00				2.00			1.00		4.00			1.00	1.00
	Actual		2.03	0.99		4.94				2.00			1.03		3.65			0.98	1.12
21 of 94	Expected		1.00			4.00			1.00	1.00	1.00		3.00	1.00	4.00				1.00
	Actual		0.94			4.00			0.88	1.02	0.99		2.81	0.97	3.60				1.00
22 of 94	Expected		1.00	1.00		3.00			1.00		1.00		3.00	2.00	4.00			1.00	
	Actual		1.02	1.03		3.00			0.75 ^f		1.04		2.54	2.18	3.55			0.00 ^d	
23 of 94	Expected			1.00		2.00	1.00	1.00	1.00		1.00		1.00	2.00	2.00	2.00	1.00		2.00
	Actual			1.05		2.10	1.00	1.10	0.80		1.05		0.80	2.22	1.94	1.81	0.00 ^d		2.20
24 of 94	Expected	1.00		1.00	1.00		1.00	2.00						1.00	5.00	2.00	1.00		2.00
	Actual	1.05		1.01	0.00 ^a		1.02	2.03						0.94	4.26	1.80	0.00 ^b		2.05
25 of 94	Expected	1.00		1.00	1.00		2.00	1.00			1.00		1.00		5.00	2.00			2.00
	Actual	1.04		1.00	0.00 ^a		2.00	1.05			0.99		0.98		4.36	1.75			1.86
26 of 94	Expected	1.00	1.00	2.00	1.00		1.00	1.00		2.00	1.00		1.00		4.00		1.00	1.00	
	Actual	1.00	1.05	1.97	0.00 ^a		0.98	0.99		1.94	0.98		0.96		3.35		0.00 ^d	0.94	
27 of 94	Expected		1.00	2.00			3.00			3.00	2.00		1.00		2.00	1.00	1.00	1.00	
	Actual		0.95	1.98			3.00			3.21	1.99		1.00		1.78	0.93	0.00 ^b	1.00	
28 of 94	Expected		1.00	3.00			2.00			5.00	1.00			1.00	1.00	1.00	1.00	1.00	
	Actual		1.00	3.03			2.03			5.00	1.02			1.00	0.99	0.98	0.00 ^d	1.02	
29 of 94	Expected			4.00			2.00			2.00	2.00			1.00	2.00	1.00		2.00	1.00
	Actual			3.76			2.00			2.11	2.00			1.01	1.83	0.95		1.97	0.85

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)
30 of 94	Expected			3.00		2.00				2.00	3.00			1.00	2.00			2.00	2.00
	Actual			3.10		2.13				1.90	3.15			1.05	1.91			2.00	1.97
31 of 94	Expected			2.00		2.00	1.00	1.00		2.00	2.00				1.00		1.00	1.00	4.00
	Actual			2.00		1.75	1.12	0.80		2.00	1.69				0.95		0.00 ^d	1.00	3.50
32 of 94	Expected			1.00		2.00	2.00	2.00	1.00	2.00	1.00			2.00			1.00		3.00
	Actual			1.13		2.26	1.90	1.95	1.04	2.00	0.99			2.05			0.00 ^d		2.96
33 of 94	Expected	1.00	1.00	2.00		1.00	2.00	2.00	1.00	2.00				2.00			1.00	1.00	1.00
	Actual	1.13	1.14	2.11		1.07	1.96	1.60	0.99	2.00				2.25			0.00 ^d	1.07	0.80
34 of 94	Expected	2.00	1.00	3.00		2.00	1.00	1.00	1.00	1.00				2.00		1.00		2.00	
	Actual	2.06	0.99	2.96		1.93	0.96	1.00	0.91	1.00				1.89		1.00		2.00	
35 of 94	Expected	2.00	1.00	2.00		2.00		1.00		1.00					2.00	1.00		2.00	3.00
	Actual	2.29	0.90	2.03		2.00		0.89		0.91					1.85	0.89		2.27	3.22
36 of 94	Expected	1.00	2.00	1.00		1.00		2.00							4.00	1.00		2.00	3.00
	Actual	1.04	2.01	1.00		1.00		1.97							3.75	0.87		1.92	2.29 ^e
37 of 94	Expected	1.00	2.00			1.00		1.00	1.00				1.00	1.00	4.00	1.00		1.00	3.00
	Actual	1.00	1.96			1.06		0.95	0.94				1.03	1.10	3.65	0.89		0.99	2.27 ^e
38 of 94	Expected	1.00	4.00			1.00		1.00	1.00		2.00		1.00	2.00	1.00	1.00		1.00	1.00
	Actual	1.00	3.96			1.15		0.93	0.94		2.06		0.98	2.25	1.06	1.03		0.98	0.80
39 of 94	Expected	1.00	3.00	1.00		3.00	1.00		2.00		2.00			2.00		1.00			1.00
	Actual	1.00	2.65	1.00		2.90	0.97		1.80		1.90			2.20		0.95			0.81
40 of 94	Expected		3.00	2.00		2.00	1.00		1.00	1.00	1.00			1.00		1.00	1.00	2.00	1.00
	Actual		3.00	1.93		2.00	1.00		0.81	0.98	0.92			1.15		0.98	0.00 ^d	1.95	0.80
41 of 94	Expected		1.00	3.00		3.00	2.00		1.00	2.00				1.00		1.00	1.00	2.00	
	Actual		1.20	3.10		3.00	2.12		0.85	1.96				1.01		1.03	0.00 ^d	2.03	
42 of 94	Expected	1.00		2.00		2.00	1.00		2.00	2.00			1.00	1.00		2.00	1.00	2.00	
	Actual	1.06		2.10		2.00	1.04		0.58 ^e	2.04			0.81	1.07		1.53 ^b	0.00 ^d	2.00	
43 of 94	Expected	2.00		3.00		2.00	2.00		3.00	2.00			1.00	1.00		1.00			
	Actual	1.85		2.97		1.93	2.00		1.27 ^e	1.94			0.74	1.19		0.78 ^b			
44 of 94	Expected	4.00		2.00		1.00	1.00		3.00	1.00			2.00	1.00			1.00	1.00	
	Actual	4.15		2.05		1.00	0.96		1.16 ^e	0.95			1.83	1.15			0.00 ^d	1.02	
45 of 94	Expected	3.00	1.00	1.00			3.00		1.00	2.00			2.00	1.00	1.00		1.00	1.00	
	Actual	3.28	1.07	1.17			3.00		0.96	2.03			2.03	1.08	0.96		0.00 ^d	0.99	
46 of 94	Expected	2.00	1.00				3.00		2.00	1.00			2.00		3.00	1.00	1.00	1.00	
	Actual	2.13	1.13				3.04		0.46 ^e	1.03			2.02		2.91	0.89	0.00 ^d	0.95	
47 of 94	Expected	1.00	1.00	2.00		1.00	3.00		2.00			1.00	1.00	1.00	3.00	1.00			
	Actual	1.08	0.95	1.92		1.00	2.86		0.35 ^e			1.01	0.95	1.11	2.69	0.87			
48 of 94	Expected	2.00		3.00	2.00	2.00	1.00		2.00		1.00	1.00		1.00	1.00	1.00			
	Actual	2.18		3.15	0.00 ^a	2.09	1.00		0.50 ^e		1.05	1.09		1.11	0.98	0.98			
49 of 94	Expected	3.00		2.00	2.00	3.00	1.00		1.00		1.00	1.00		2.00		1.00			
	Actual	3.18		2.05	0.00 ^a	3.00	0.98		1.00		1.02	1.06		2.28		1.01			
50 of 94	Expected	2.00		2.00	1.00	2.00	1.00		1.00	1.00	1.00		1.00	2.00	2.00	1.00			
	Actual	2.10		2.06	0.00 ^a	2.00	0.99		0.98	1.02	0.99		0.98	2.28	1.93	0.93			
51 of 94	Expected	1.00		2.00		2.00	1.00	1.00	1.00	1.00			1.00	3.00	2.00				2.00
	Actual	1.08		2.08		2.14	1.00	0.80	1.00	1.04			1.02	3.40	1.86				1.84
52 of 94	Expected			1.00	1.00	2.00	1.00	1.00	1.00	1.00			1.00	3.00	2.00	1.00			2.00
	Actual			0.97	0.00 ^a	2.00	0.90	0.80	0.75 ^f	0.97			1.02	3.15	1.81	0.73 ^b			1.71
53 of 94	Expected	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00			2.00	1.00	1.00		1.00	3.00
	Actual	0.90	0.75	0.94	0.00 ^a	1.00	0.90	0.80	0.70 ^f		0.92			2.02	0.83	0.72 ^b		0.86	2.80
54 of 94	Expected	1.00	2.00		1.00	1.00	1.00		1.00	1.00	2.00	1.00		1.00	1.00	1.00		1.00	2.00
	Actual	1.10	1.87		0.00 ^a	1.06	0.82		0.83	1.00	2.04	1.09		1.06	0.99	0.96		0.91	1.93
55 of 94	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	1.01	2.81	1.00			0.99		0.97	2.06	1.01	0.99		1.05	0.87	0.94		0.86	1.78
56 of 94	Expected		3.00	1.00		1.00	2.00		2.00	2.00		1.00		1.00	2.00	1.00			1.00
	Actual		3.18	1.10		1.00	2.11		1.96	2.05		1.07		1.16	0.97	0.97			1.16
57 of 94	Expected	2.00	2.00	1.00		1.00	2.00		3.00	2.00			1.00	1.00	2.00				
	Actual	2.14	2.02	1.01		1.00	2.08		2.80	1.97			1.01	1.06	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)
58 of 94	Expected	2.00	1.00			2.00	5.00		3.00	1.00			2.00		1.00				
	Actual	1.99	0.96			2.00	4.99		2.85	1.04			1.95		0.91				
59 of 94	Expected	2.00		1.00		1.00	5.00		2.00			1.00	2.00			1.00	1.00		1.00
	Actual	2.00		1.00		1.05	5.02		1.93			0.97	1.93			0.97	0.00 ^b		1.01
60 of 94	Expected			1.00		1.00	5.00	1.00	1.00			1.00	1.00			1.00	2.00	2.00	1.00
	Actual			1.00		0.94	4.76	0.99	0.86			0.99	0.88			0.95	0.00 ^b	2.02	1.11
61 of 94	Expected			2.00		3.00	4.00	2.00				1.00				1.00	1.00	2.00	1.00
	Actual			2.11		3.00	4.26	2.01				1.13				1.08	0.00 ^d	2.12	1.13
62 of 94	Expected	2.00		2.00		3.00	3.00	2.00							1.00		1.00	3.00	
	Actual	2.12		2.05		3.00	3.02	1.89							0.87		0.00 ^d	3.02	
63 of 94	Expected	2.00		2.00		5.00	2.00	1.00			1.00				2.00	1.00		1.00	
	Actual	2.10		2.00		4.40	2.06	0.99			1.02				1.87	0.95		1.04	
64 of 94	Expected	3.00		3.00		2.00	2.00		2.00		1.00				2.00	1.00		1.00	
	Actual	2.93		3.00		2.05	1.97		2.04		1.00				1.82	0.96		0.96	
65 of 94	Expected	1.00		5.00		2.00	1.00		2.00		2.00				1.00	2.00			1.00
	Actual	1.20		5.23		2.00	1.12		2.19		2.13				1.00	2.11			1.07
66 of 94	Expected	1.00		4.00		1.00	1.00		3.00		2.00	1.00			1.00	1.00			2.00
	Actual	1.01		3.87		1.00	0.90		2.33 ^e		1.97	1.07			0.95	0.94			1.58 ^e
67 of 94	Expected	1.00		3.00		2.00			1.00		2.00	1.00	1.00		1.00	3.00			2.00
	Actual	0.97		3.00		2.05			0.57 ^c		1.96	0.93	1.04		0.92	2.69			1.53 ^c
68 of 94	Expected	1.00		2.00		3.00	1.00		1.00		2.00	1.00	2.00			2.00			2.00
	Actual	1.30		1.97		3.00	1.08		0.15 ^e		1.89	0.80	1.92			1.86			1.49 ^e
69 of 94	Expected	1.00	2.00	1.00		3.00	1.00			1.00	2.00	1.00	2.00			2.00			1.00
	Actual	1.12	2.07	1.05		3.00	0.95			1.03	2.05	1.07	2.03			1.97			1.03
70 of 94	Expected		2.00	3.00		3.00	1.00				2.00	4.00	1.00	1.00					
	Actual		2.05	3.17		3.00	1.00				2.07	4.12	1.08	1.02					
71 of 94	Expected		2.00	4.00		2.00	1.00				3.00	2.00	1.00	1.00					1.00
	Actual		2.05	4.20		2.00	1.00				3.10	1.97	1.07	1.01					1.04
72 of 94	Expected			6.00			1.00		1.00	2.00	2.00		1.00			1.00	1.00	1.00	1.00
	Actual			6.25			1.06		0.80	2.00	2.06		1.03			1.05	0.00 ^d	1.06	1.06
73 of 94	Expected	1.00		4.00		1.00	1.00		1.00	4.00			1.00			1.00	1.00	1.00	1.00
	Actual	1.19		4.18		1.00	1.10		0.75 ^f	3.70			0.88			1.00	0.00 ^d	1.00	0.80
74 of 94	Expected	1.00	1.00	2.00		3.00			1.00	4.00						2.00	1.00	1.00	1.00
	Actual	1.00	0.92	2.02		3.05			0.85	4.04						1.81	0.00 ^b	0.90	1.06
75 of 94	Expected		1.00	3.00		3.00		1.00		5.00			1.00		1.00	1.00			1.00
	Actual		0.95	3.00		3.05		0.91		5.01			1.02		0.95	0.98			1.01
76 of 94	Expected		1.00	5.00		2.00		1.00		2.00	1.00		1.00		1.00	1.00		1.00	1.00
	Actual		1.10	5.05		2.00		0.96		2.02	0.80		0.99		0.95	0.95		1.05	0.76 ^g
77 of 94	Expected			4.00		2.00		1.00		1.00	3.00		1.00		2.00			1.00	2.00
	Actual			4.07		2.00		0.89		0.98	2.50		0.88		1.81			1.00	1.50
78 of 94	Expected	1.00		3.00		2.00				2.00	5.00				1.00			1.00	2.00
	Actual	1.02		3.11		2.00				1.99	4.50				0.93			1.01	1.70
79 of 94	Expected	1.00		3.00		2.00	2.00		1.00	1.00	4.00				1.00				1.00
	Actual	1.09		3.07		2.00	1.85		0.81	0.99	3.65				0.98				0.75
80 of 94	Expected	1.00		3.00	1.00	2.00	2.00	1.00	1.00	1.00	2.00		2.00					1.00	
	Actual	1.15		3.24	0.00 ^a	2.08	1.97	1.04	0.85	1.00	2.10		2.10					1.04	
81 of 94	Expected			3.00	2.00	3.00	2.00	1.00	1.00		1.00		2.00					1.00	
	Actual			3.34	0.00 ^a	3.34	2.00	0.94	0.85		1.04		2.07					1.01	
82 of 94	Expected			2.00	3.00	3.00		1.00			2.00	1.00	2.00		1.00			1.00	1.00
	Actual			1.98	0.00 ^a	3.03		1.00			1.90	0.99	1.95		0.90			1.00	0.94
83 of 94	Expected			4.00	2.00	2.00	1.00				2.00	1.00			1.00	1.00		2.00	1.00
	Actual			3.85	0.00 ^a	2.00	1.01				1.78	0.99			0.91	0.97		2.07	0.91
84 of 94	Expected			2.00		3.00	1.00				2.00	1.00		1.00	2.00	1.00		3.00	1.00
	Actual			2.04		3.00	1.01				1.77	1.00		1.03	1.84	0.94		3.11	0.81
85 of 94	Expected		1.00	2.00		3.00	1.00			1.00	2.00			1.00	2.00	1.00		3.00	
	Actual		1.00	2.07		3.00	1.00			0.98	2.03			1.13	1.88	0.93		3.20	
86 of 94	Expected		1.00	2.00		3.00	1.00		1.00	1.00	4.00				2.00			1.00	1.00
	Actual		1.20	2.13		3.00	1.01		0.91	1.05	3.71				1.83			0.94	0.97

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)
87 of 94	Expected		1.00	2.00		2.00	2.00		1.00	2.00	3.00	1.00			1.00				2.00
	Actual		1.13	1.95		2.00	1.97		0.80	1.93	2.45	0.80			0.93				1.78
88 of 94	Expected	1.00		1.00		2.00	2.00		3.00	2.00	1.00	1.00			1.00			1.00	2.00
	Actual	1.15		0.89		2.02	2.00		2.55	1.70	0.80	1.07			0.93			0.95	0.75
89 of 94	Expected	2.00				2.00	1.00		2.00	1.00		1.00			3.00	1.00		2.00	2.00
	Actual	2.00				2.02	1.01		1.79	1.00		0.89			2.79	0.91		2.01	1.96
90 of 94	Expected	2.00				1.00			2.00	4.00					3.00	1.00		2.00	2.00
	Actual	2.00				0.93			1.40	4.23					2.89	0.79		1.82	1.91
91 of 94	Expected	2.00					1.00		1.00	4.00					4.00	1.00		1.00	3.00
	Actual	1.85					1.00		1.14	3.75					3.61	0.97		0.88	3.23
92 of 94	Expected	1.00			1.00		1.00		1.00	4.00		1.00	1.00		4.00		1.00		2.00
	Actual	1.05			0.00 ^a		1.00		0.99	4.04		0.76 ^h	1.00		3.75		0.00 ^d		1.95
93 of 94	Expected	1.00		1.00	1.00	1.00	2.00		1.00	2.00		1.00	1.00		4.00			1.00	
	Actual	1.00		1.03	0.00 ^a	0.98	1.99		0.97	1.91		1.02	1.01		3.81			0.00 ^b	
94 of 94	Expected		1.00	1.00	3.00	1.00	1.00		2.00	1.00		1.00	1.00		3.00			1.00	
	Actual		0.98	1.01	0.00 ^a	0.97	1.00		2.06	0.99		0.97	0.87		2.63			0.00 ^d	

^aCys was completely destroyed during hydrolysis

^bThr was completely destroyed during hydrolysis

^cGlx was only partially hydrolyzed during hydrolysis

^dTrp was completely destroyed during hydrolysis

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

^fIle was only partially hydrolyzed during hydrolysis

^gVal was only partially hydrolyzed during hydrolysis

^hMet was only partially hydrolyzed during hydrolysis

Date: 22 JUN 2012

Signature:

Dorothy C. Young

Title: Technical Manager, BEI Authentication or designee

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