

Peptide Array, Influenza Virus B/Malaysia/2506/2004 Hemagglutinin Protein

Catalog No. NR-18967

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Product Description: The 95-peptide array spans the hemagglutinin (HA) protein of the B/Malaysia/2506/2004 strain of influenza virus (GenPept: ABU99194.1). Peptides are 16- to 18-mers, with 9 to 12 amino acid overlaps. **Peptide 93 is unavailable at this time. An additional arginine was added to the C-terminal end of peptide 94.**

Lot: 585683-2

Note: The lot numbers of the individual peptides are shown on the vial labels and in Table 1 below.

The following information applies to all peptides:

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

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

Table 1							
Peptide	Lot #	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Purity by HPLC	Peptide Content
01 of 95	LS1396	6/24/2010	17	1-LSTHGSTSNADRICTGI-17	1733	97.15%	73.85%
02 of 95	LS1395	7/12/2010	18	7-TSNADRICTGITSSNSPH-24	1861	89.35%	72.64%
03 of 95	LS1394	7/2/2010	17	13-ICTGITSSNSPHVVKTA-29	1715	98.14%	70.77%
04 of 95	LS1383	7/6/2010	17	19-SSNSPHVVKATQGEVN-35	1755	99.68%	80.69%
05 of 95	LS1445	6/22/2010	18	25-VVKATQGEVNVTVIPL-42	1825	100.00%	71.81%
06 of 95	LS1382	7/2/2010	16	32-GEVNVTVIPLTTTPT-47	1599	99.36%	75.90%
07 of 95	LS1381	6/21/2010	17	37-TGVIPLTTTPTKSHFAN-53	1785	97.96%	80.51%
08 of 95	LS1386	6/29/2010	16	44-TTPTKSHFANLKGTE-59	1733	100.00%	75.83%
09 of 95	LS1385	7/12/2010	18	49-SHFANLKGTE TRGKLC PK-66	1987	99.04%	72.10%
10 of 95	LS1384	6/23/2010	17	55-KGTE TRGKLC PKCLNCT-71	1852	98.69%	71.10%
11 of 95	LS1378	6/23/2010	17	61-GKLC PKCLNCTDL DVAL-77	1806	93.48%	71.83%
12 of 95	LS1377	7/14/2010	17	67-CLNCTDL DVALGR PKCT-83	1822	90.82%	76.64%
13 of 95	LS1373	7/9/2010	17	73-LDVALGR PKCTGNIPSA-89	1712	99.69%	70.04%
14 of 95	LS1372	7/9/2010	17	79-RPKCTGNIP SARVSILH-95	1849	98.91%	62.40%
15 of 95	LS1376	6/24/2010	17	85-NIP SARVSILHEVRPV-101	1888	99.84%	65.28%
16 of 95	LS1444	6/22/2010	17	91-VSILHEVRPV TSGCFPI-107	1854	98.96%	75.69%
17 of 95	LS1443	8/10/2010	17	97-VRPV TSGCFPIMHDRTK-113	1944	99.80%	68.31%
18 of 95	LS1442	6/29/2010	17	103-GCFPIMHDRTKIRQLPK-119	2040	96.72%	63.50%
19 of 95	LS1368	7/12/2010	17	109-HDRTKIRQLPKLLRGYE-125	2123	100.00%	75.07%
20 of 95	LS1367	6/25/2010	17	115-RQLPKLLRGYEHIRLST-131	2080	99.89%	61.50%
21 of 95	LS1371	7/12/2010	17	121-LRGYEHIRLSTHNVINA-137	1993	97.24%	67.07%
22 of 95	LS1370	7/12/2010	17	127-IRLSTHNVINAENAPGG-143	1763	98.29%	72.11%
23 of 95	LS1369	7/2/2010	17	133-NVINAENAPGGPYKIGT-149	1715	99.93%	76.98%
24 of 95	LS1363	7/2/2010	17	139-NAPGGPYKIGTSGSCPN-155	1620	99.90%	82.25%

Table 1

Peptide	Lot #	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Purity by HPLC	Peptide Content
25 of 95	LS1362	6/24/2010	17	145-YKIGTSGSCPNTVNGNG-161	1669	99.58%	81.44%
26 of 95	A4686	9/2/2010	17	151-GSCPNTVNGNGFFATMA-167	1688	100.00%	80.45%
27 of 95	LS1375	7/12/2010	17	157-TNGNGFFATMAWAVPKN-173	1826	96.59%	76.51%
28 of 95	LS1374	6/24/2010	17	163-FATMAWAVPKNDNNKTA-179	1879	98.88%	79.04%
29 of 95	LS1358	7/12/2010	17	169-AVPKNDNNKTATNSLTI-185	1801	98.96%	65.85%
30 of 95	LS1357	8/13/2010	17	175-NNKTATNSLTIEVPYIC-191	1881	85.50%	71.46%
31 of 95	LS1360	9/14/2010	17	181-NSLTIEVPYICTEGEDQ-197	1911	77.57%	77.55%
32 of 95	LS1359	9/13/2010	17	187-VPYICTEGEDQITVWGF-203	1957	82.79%	75.16%
33 of 95	LS1355	8/10/2010	17	193-EGEDQITVWGFHSDNET-209	1964	95.33%	58.25%
34 of 95	LS1354	7/9/2010	17	199-TVWGFHSDNETQMAKLY-215	2027	98.94%	72.58%
35 of 95	LS1350	7/12/2010	17	205-SDNETQMAKLYGDSKPQ-221	1912	98.59%	79.28%
36 of 95	LS1349	6/23/2010	17	211-MAKLYGDSKPQKFTSSA-227	1859	99.27%	74.75%
37 of 95	LS1348	7/2/2010	17	217-DSKPQKFTSSANGVTTH-233	1805	99.60%	81.24%
38 of 95	LS1356	6/22/2010	17	223-FTSSANGVTTHYVSQIG-239	1769	97.46%	78.12%
39 of 95	LS1347	6/23/2010	17	229-GVTTHYVSQIGGFNPQT-245	1806	99.91%	79.93%
40 of 95	LS1366	6/24/2010	18	235-VSQIGGFNPQTEDGGLPQ-252	1844	98.99%	81.09%
41 of 95	LS1353	8/18/2010	17	241-FPNQTEDGGLPQSGRIV-257	1815	95.99%	73.43%
42 of 95	LS1352	6/24/2010	17	247-DGGLPQSGRIVVDYMVQ-263	1834	95.06%	77.49%
43 of 95	LS1380	6/22/2010	17	253-SGRIVVDYMVQKSGKTG-269	1825	99.64%	69.96%
44 of 95	LS1379	7/2/2010	17	259-DYMVQKSGKTGTITYQR-275	1976	99.00%	65.18%
45 of 95	LS1345	6/17/2010	17	266-GKTGTITYQRGILLPQK-282	1874	94.99%	66.78%
46 of 95	LS1344	6/24/2010	16	272-TYQRGILLPQKVCAS-287	1863	98.30%	75.89%
47 of 95	LS1365	6/21/2010	17	277-ILLPQKVCASGRSKVI-293	1898	99.83%	65.68%
48 of 95	LS1364	7/12/2010	17	283-VWCASGRSKVIKGSPL-299	1801	82.07%	66.47%
49 of 95	LS1343	6/23/2010	17	289-RSKVIKGSPLIGEADC-305	1786	85.70%	73.65%
50 of 95	LS1342	7/2/2010	17	295-GSPLIGEADCLHEKYG-311	1802	98.38%	79.81%
51 of 95	LS1341	7/12/2010	17	301-GEADCLHEKYGGLNKS-317	1849	97.38%	68.40%
52 of 95	LS1340	7/21/2010	17	307-HEKYGGLNKSPPYTG-323	1971	84.91%	66.97%
53 of 95	LS1339	6/23/2010	17	313-LNKSPPYTGHEHAKAIG-329	1877	99.24%	75.26%
54 of 95	LS1338	6/24/2010	17	319-YYTGEHAKAIGNCPIWV-335	1922	89.49%	78.89%
55 of 95	LS1337	7/2/2010	17	325-AKAIGNCPIWVKTPLKL-341	1852	93.02%	77.56%
56 of 95	LS1336	7/9/2010	17	331-CPIWVKTPLKLANGTKY-347	1932	87.58%	77.58%
57 of 95	LS1335	9/2/2010	17	337-TPLKLANGTKYRPPAKL-353	1868	99.86%	58.73%
58 of 95	LS1334	7/2/2010	17	343-NGTKYRPPAKLLKERGF-359	1975	100.00%	80.55%
59 of 95	LS1351	7/2/2010	17	349-PPAKLLKERGFFGAIAG-365	1772	100.00%	77.75%
60 of 95	LS1333	8/10/2010	17	355-KERGFFGAIAGFLEGGW-371	1842	92.32%	79.03%
61 of 95	LS1332	10/8/2010	17	361-GAIAGFLEGGWEGMIAG-377	1636	82.93%	66.41%
62 of 95	LS1346	7/2/2010	17	367-LEGGWEGMIAGWHGYTS-383	1851	95.98%	70.55%
63 of 95	LS1328	6/23/2010	17	373-GMIAGWHGYTSHGAHGV-389	1738	99.03%	72.82%
64 of 95	LS1327	7/12/2010	17	379-HGYTSHGAHGVAAADL-395	1663	97.43%	75.85%
65 of 95	LS1326	6/21/2010	17	385-GAHGVAAADLKSTQEA-401	1625	100.00%	72.94%
66 of 95	LS1325	8/10/2010	17	391-VAADLKSTQEAINKITK-407	1830	98.69%	77.45%

Peptide	Lot #	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Purity by HPLC	Peptide Content
67 of 95	LS1331	8/13/2010	17	397-STQEAINKITKNLNSLS-413	1861	97.35%	68.72%
68 of 95	LS1330	8/18/2010	17	403-NKITKNLNSLSELEVKN-419	1944	88.62%	69.56%
69 of 95	LS1329	6/24/2010	17	409-LNSLSELEVKNLQRLSG-425	1900	100.00%	70.38%
70 of 95	LS1323	7/2/2010	17	415-LEVKNLQRLSGAMDELH-431	1953	99.48%	77.75%
71 of 95	LS1322	7/9/2010	16	422-RLSGAMDELHNEILEL-437	1840	89.98%	74.31%
72 of 95	LS1321	8/2/2010	17	427-MDELHNEILELDEKVDD-443	2057	86.53%	70.78%
73 of 95	LS1320	8/2/2010	17	433-EILELDEKVDDL RADTI-449	1987	97.82%	80.97%
74 of 95	LS1319	8/2/2010	17	439-EKVDDL RADTISSQIEL-455	1932	90.43%	67.91%
75 of 95	A4761	8/2/2010	17	445-RADTISSQIELAVLLSN-461	1830	Crude	71.16%
76 of 95	LS1315	8/18/2010	17	451-SQIELAVLLSNEGIINS-467	1800	86.07%	74.56%
77 of 95	LS1314	7/21/2010	17	457-VLLSNEGIINSEDEHLL-473	1895	98.37%	80.07%
78 of 95	LS1318	6/24/2010	17	463-GIINSEDEHLLALERKL-479	1950	99.26%	67.16%
79 of 95	LS1317	7/21/2010	18	469-DEHLLALERKLLKMLGPS-486	2079	99.74%	68.00%
80 of 95	LS1316	6/24/2010	17	475-LERKLLKMLGPSAVEIG-491	1869	100.00%	66.56%
81 of 95	LS1313	7/9/2010	17	481-KMLGPSAVEIGNCFET-497	1753	94.75%	77.34%
82 of 95	LS1312	6/22/2010	17	487-AVEIGNCFETKHKCNQ-503	1878	96.84%	72.86%
83 of 95	LS1311	6/29/2010	17	493-GCFETKHKCNQTCLDRI-509	1996	91.71%	75.55%
84 of 95	LS1310	6/29/2010	17	499-HKCNQTCLDRIAAGTFD-515	1893	97.24%	76.05%
85 of 95	LS1309	8/13/2010	17	505-CLDRIAAGTFDAGEFSL-521	1786	93.29%	67.66%
86 of 95	LS1308	6/24/2010	17	511-AGTFDAGEFSLPTFDSL-527	1775	97.26%	81.03%
87 of 95	LS1307	7/2/2010	17	517-GEFSLPTFDSL NITAAS-533	1770	92.36%	76.52%
88 of 95	LS1306	8/10/2010	17	523-TFDSL NITAASLNDDGL-539	1767	89.74%	75.53%
89 of 95	LS1305	8/10/2010	17	529-ITAASLNDDGLDNHTIL-545	1783	97.68%	82.33%
90 of 95	LS1304	7/6/2010	17	535-NDDGLDNHTILYYSTA-551	1925	95.48%	69.01%
91 of 95	LS1303	7/12/2010	17	540-DNHTILYYSTAASSLA-556	1840	96.78%	64.71%
92 of 95	LS1302	9/13/2010	16	548-YSTAASSLAVTLMIAI-563	1612	89.81%	78.65%
93 of 95	PR3478	9/16/2010	16	553-SSLAVTLMIAIFVYVM-568	1758	N/A	N/A
94 of 95	PR3465	10/6/2010	17	560-MIAIFVYVMVSRDNVSR-575	2000	89.40%	69.37%
95 of 95	2082-19/24	9/27/2010	16	565-VYVMVSRDNVSCSICL-580	1788	Crude	65.54%

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)
01 of 95	Expected	1.00	1.00	2.00	1.00		2.00	1.00	2.00	1.00					3.00	3.00			
	Actual	1.03	0.99	2.06	0.00 ^c		2.04	1.01	1.86	1.06					2.94	2.97			
02 of 95	Expected	1.00	1.00	3.00	1.00		1.00	1.00	2.00					1.00	4.00	3.00			
	Actual	1.04	1.02	3.15	0.00 ^c		1.05	1.02	1.76					0.99	3.96	3.03			
03 of 95	Expected	1.00		1.00	1.00		1.00	1.00	2.00		1.00			1.00	3.00	3.00			2.00
	Actual	1.04		1.06	0.00 ^c		1.03	0.98	1.81		1.02			1.06	3.07	3.06			1.82
04 of 95	Expected	1.00		2.00		2.00	1.00	1.00			1.00			1.00	3.00	2.00			3.00
	Actual	1.06		1.93		2.18	1.03	0.98			1.00			1.08	2.94	2.06			2.77
05 of 95	Expected	1.00		1.00		2.00	2.00		1.00	1.00	1.00			1.00		3.00			5.00
	Actual	1.02		1.04		2.04	2.06		0.86	1.06	0.98			1.07		3.12			4.65

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)	
06 of 95	Expected			1.00		1.00	2.00		1.00	1.00				2.00		5.00			3.00	
	Actual			1.02		0.97	2.04		0.83	1.06				2.11		5.15			2.66	
07 of 95	Expected	1.00		1.00			1.00	1.00	1.00	1.00	1.00		1.00	2.00	1.00	5.00			1.00	
	Actual	1.00		1.00			1.00	0.99	0.91	1.07	1.02		1.06	2.06	1.04	5.03			0.93	
08 of 95	Expected	1.00		1.00		1.00	1.00	1.00		1.00	2.00		1.00	1.00	1.00	5.00				
	Actual	1.02		1.00		1.02	1.02	0.97		1.04	2.02		1.07	1.02	0.90	4.87				
09 of 95	Expected	1.00	1.00	1.00	1.00	1.00	2.00	1.00		2.00	3.00		1.00	1.00	1.00	2.00				
	Actual	0.98	1.00	0.99	0.00 ^c	1.06	2.04	0.93		2.10	3.05		1.04	0.95	0.90	2.04				
10 of 95	Expected		1.00	1.00	3.00	1.00	2.00			2.00	3.00			1.00		3.00				
	Actual		0.99	1.02	0.00 ^c	0.97	2.03			2.06	3.09			0.97		3.05				
11 of 95	Expected	1.00		3.00	3.00		1.00			4.00	2.00			1.00		1.00			1.00	
	Actual	1.01		2.98	0.00 ^c		0.97			4.06	2.02			0.94		1.02			1.08	
12 of 95	Expected	1.00	1.00	3.00	3.00		1.00			3.00	1.00			1.00		2.00			1.00	
	Actual	1.01	0.95	2.98	0.00 ^c		1.03			3.01	1.02			0.91		2.06			1.04	
13 of 95	Expected	2.00	1.00	2.00	1.00		2.00		1.00	2.00	1.00			2.00	1.00	1.00			1.00	
	Actual	2.09	0.98	2.01	0.00 ^c		2.00		1.00	2.03	1.01			1.96	1.00	1.01			1.00	
14 of 95	Expected	1.00	2.00	1.00	1.00		1.00	1.00	2.00	1.00	1.00			2.00	2.00	1.00			1.00	
	Actual	1.02	1.88	1.03	0.00 ^c		0.98	0.99	1.98	1.05	1.01			2.01	2.00	1.03			1.00	
15 of 95	Expected	1.00	2.00	1.00		1.00		1.00	2.00	1.00				2.00	2.00	1.00			3.00	
	Actual	0.99	1.93	1.02		1.05		1.01	1.99	1.06				2.02	2.01	1.03			3.01	
16 of 95	Expected		1.00		1.00	1.00	1.00	1.00	2.00	1.00			1.00	2.00	2.00	1.00			3.00	
	Actual		0.96		0.00 ^c	1.05	1.05	0.98	2.01	1.03			1.08	1.90	2.01	1.00			3.07	
17 of 95	Expected		2.00	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		1.89	1.03	0.00 ^c		0.99	1.01	1.00		1.04	0.98	1.09	1.88	1.03	2.03			1.98	
18 of 95	Expected		2.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	2.00	1.00	1.00	2.00		1.00				
	Actual		1.93	1.01	0.00 ^c	0.96	0.98	0.97	1.95	1.05	2.05	1.00	1.06	1.97		1.05				
19 of 95	Expected		3.00	1.00		2.00	1.00	1.00	1.00	3.00	2.00			1.00		1.00		1.00		
	Actual		2.91	1.02		1.95	1.00	0.99	0.96	3.08	2.06			1.01		1.05		1.02		
20 of 95	Expected		3.00			2.00	1.00	1.00	1.00	4.00	1.00			1.00	1.00	1.00		1.00		
	Actual		2.92			2.11	1.01	0.96	0.95	4.15	1.01			0.99	0.91	1.02		1.05		
21 of 95	Expected	1.00	2.00	2.00		1.00	1.00	2.00	2.00	2.00					1.00	1.00		1.00	1.00	
	Actual	1.04	1.97	2.10		1.07	1.02	2.02	1.89	2.07					0.97	1.02		0.98	1.01	
22 of 95	Expected	2.00	1.00	3.00		1.00	2.00	1.00	2.00	1.00				1.00	1.00	1.00			1.00	
	Actual	2.09	1.01	3.20		1.07	1.86	1.03	1.84	1.11				1.01	0.92	1.03			0.90	
23 of 95	Expected	2.00		3.00		1.00	3.00		2.00		1.00			2.00		1.00		1.00	1.00	
	Actual	2.04		3.01		0.97	3.06		1.86		1.00			2.09		1.09		1.05	0.93	
24 of 95	Expected	1.00		2.00	1.00		4.00		1.00	1.00				3.00	2.00	1.00		1.00		
	Actual	1.04		1.80	0.00 ^c		4.04		1.01	1.00				3.08	1.79	1.01		1.04		
25 of 95	Expected			3.00	1.00		4.00		1.00	1.00				1.00	2.00	2.00		1.00	1.00	
	Actual			2.97	0.00 ^c		3.91		1.00	0.99				1.03	1.82	2.01		1.03	1.03	
26 of 95	Expected	2.00		3.00	1.00		3.00					1.00	2.00	1.00	1.00	2.00			1.00	
	Actual	2.01		3.05	0.00 ^c		2.99					1.02	2.20	1.02	0.94	1.94			1.02	
27 of 95	Expected	3.00		3.00			2.00			1.00	1.00	2.00	1.00			2.00	1.00		1.00	
	Actual	3.01		3.01			1.99			0.98	1.00	2.09	1.00			2.03	0.00 ^a		1.01	
28 of 95	Expected	4.00		4.00							2.00	1.00	1.00	1.00		2.00	1.00		1.00	
	Actual	3.95		3.98							2.00	1.00	1.05	0.99		2.03	0.00 ^a		1.01	
29 of 95	Expected	2.00		5.00					1.00	1.00	2.00			1.00	1.00	3.00			1.00	
	Actual	2.02		5.04					1.01	1.03	1.97			0.99	0.99	3.04			1.02	
30 of 95	Expected	1.00		3.00	1.00	1.00			2.00	1.00	1.00			1.00	1.00	3.00		1.00	1.00	
	Actual	0.98		3.06	0.00 ^c	1.02			1.87	1.04	1.05			0.97	1.06	2.85		1.03	1.09	
31 of 95	Expected			2.00	1.00	4.00	1.00		2.00	1.00				1.00	1.00	2.00		1.00	1.00	
	Actual			1.99	0.00 ^c	3.89	1.01		1.92	1.07				1.02	0.99	2.03		1.08	1.04	
32 of 95	Expected			1.00	1.00	3.00	2.00		2.00				1.00	1.00		2.00	1.00	1.00	2.00	
	Actual			1.06	0.00 ^c	2.86	2.05		1.85				1.08	0.93		2.03	0.00 ^a	1.07	1.87	
33 of 95	Expected			3.00		4.00	2.00	1.00	1.00				1.00		1.00	2.00	1.00		1.00	
	Actual			3.09		4.04	2.02	1.00	1.01				1.04		1.00	2.05	0.00 ^a		1.02	

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)
34 of 95	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	1.00
	Actual	1.03		2.03		2.06	0.99	1.00		1.04	0.96	0.97	1.02		0.90	1.98	0.00 ^a	1.02	0.99
35 of 95	Expected	1.00		3.00		3.00	1.00			1.00	2.00	1.00		1.00	2.00	1.00		1.00	
	Actual	0.97		3.12		3.11	1.02			1.06	2.07	0.94		1.04	1.88	1.02		1.02	
36 of 95	Expected	2.00		1.00		1.00	1.00			1.00	3.00	1.00	1.00	1.00	3.00	1.00		1.00	
	Actual	2.06		1.01		1.00	0.99			1.04	3.06	1.03	1.03	1.02	2.91	0.99		1.01	
37 of 95	Expected	1.00		2.00		1.00	1.00	1.00			2.00		1.00	1.00	3.00	3.00			1.00
	Actual	1.03		1.97		1.03	1.02	1.00			1.91		1.10	0.97	2.74	3.03			1.04
38 of 95	Expected	1.00		1.00		1.00	2.00	1.00	1.00				1.00		3.00	3.00		1.00	2.00
	Actual	1.04		1.02		1.02	2.05	1.00	1.00				0.99		3.11	2.94		1.01	2.02
39 of 95	Expected			1.00		2.00	3.00	1.00	1.00				1.00	1.00	1.00	3.00		1.00	2.00
	Actual			1.04		2.07	3.06	0.99	1.03				1.00	1.04	0.94	3.04		1.00	2.06
40 of 95	Expected			2.00		4.00	4.00		1.00	1.00			1.00	2.00	1.00	1.00			1.00
	Actual			2.00		4.06	3.98		0.99	1.03			1.07	1.91	0.91	0.98			1.00
41 of 95	Expected		1.00	2.00		3.00	3.00		1.00	1.00			1.00	2.00	1.00	1.00			1.00
	Actual		1.00	2.00		3.03	3.13		0.96	1.04			1.09	1.99	0.91	0.97			0.93
42 of 95	Expected		1.00	2.00		2.00	3.00		1.00	1.00		1.00		1.00	1.00			1.00	3.00
	Actual		0.98	2.18		2.13	3.17		0.92	1.06		0.92		0.98	1.00			1.01	3.03
43 of 95	Expected		1.00	1.00		1.00	3.00		1.00		2.00	1.00			2.00	1.00		1.00	3.00
	Actual		1.00	1.04		1.05	3.11		0.92		2.18	1.01			1.98	1.02		1.05	2.78
44 of 95	Expected		1.00	1.00		2.00	2.00		1.00		2.00	1.00			1.00	3.00		2.00	1.00
	Actual		0.98	1.04		2.01	2.03		1.01		2.04	0.99			1.01	3.07		2.07	1.00
45 of 95	Expected		1.00			2.00	3.00		2.00	2.00				1.00		3.00		1.00	
	Actual		1.01			1.97	3.06		1.99	2.06	2.04			0.96		3.08		1.01	
46 of 95	Expected	1.00	1.00		1.00	2.00	1.00		1.00	2.00	1.00			1.00	1.00	1.00	1.00	1.00	1.00
	Actual	1.02	1.00		0.00 ^c	2.09	1.02		1.00	2.06	1.03			0.99	0.97	1.01	0.00 ^a	1.02	1.01
47 of 95	Expected	1.00	1.00		1.00	1.00	1.00		2.00	2.00	2.00			1.00	2.00		1.00		2.00
	Actual	1.05	1.00		0.00 ^c	1.05	1.03		1.80	2.11	2.13			1.00	2.06		0.00 ^a		1.82
48 of 95	Expected	1.00	1.00		1.00		2.00		1.00	2.00	2.00			1.00	3.00		1.00		2.00
	Actual	1.02	0.98		0.00 ^c		2.04		0.79	2.17	2.12			0.97	2.91		0.00 ^a		1.79
49 of 95	Expected	1.00	1.00	1.00	1.00	1.00	2.00		2.00	2.00	2.00			1.00	2.00				1.00
	Actual	1.05	1.01	1.05	0.00 ^c	1.07	2.07		1.80	2.13	2.15			0.98	2.02				0.85
50 of 95	Expected	1.00		1.00	1.00	2.00	3.00	1.00	1.00	3.00	1.00			1.00	1.00			1.00	
	Actual	1.02		1.04	0.00 ^c	2.05	3.06	0.98	1.03	3.14	1.00			1.00	0.96				0.96
51 of 95	Expected	1.00		2.00	1.00	2.00	3.00	1.00		2.00	3.00				1.00			1.00	
	Actual	1.03		1.99	0.00 ^c	2.04	3.03	0.96		2.03	3.02				0.92			0.96	
52 of 95	Expected			1.00		2.00	3.00	1.00		1.00	3.00			1.00	1.00	1.00		3.00	
	Actual			1.05		1.99	2.97	1.02		1.05	3.18			1.05	0.95	0.93		3.12	
53 of 95	Expected	2.00		1.00		1.00	2.00	1.00	1.00	1.00	3.00			1.00	1.00	1.00		2.00	
	Actual	1.99		1.02		1.04	2.00	1.00	0.99	1.01	3.10			1.03	0.98	1.01		2.05	
54 of 95	Expected	2.00		1.00	1.00	1.00	2.00	1.00	2.00		1.00			1.00		1.00	1.00	2.00	1.00
	Actual	2.05		1.02	0.00 ^c	0.99	2.03	0.97	2.01		1.05			0.97		1.02	0.00 ^a	1.91	1.03
55 of 95	Expected	2.00		1.00	1.00		1.00		2.00	2.00	3.00			2.00		1.00	1.00		1.00
	Actual	2.01		1.03	0.00 ^c		0.99		1.96	2.08	2.95			2.02		1.02	0.00 ^a		0.98
56 of 95	Expected	1.00		1.00	1.00		1.00		1.00	2.00	3.00			2.00		2.00	1.00	1.00	1.00
	Actual	1.03		1.02	0.00 ^c		1.02		0.96	2.04	3.06			1.93		2.08	0.00 ^a	0.97	0.99
57 of 95	Expected	2.00	1.00	1.00			1.00			3.00	3.00			3.00		2.00		1.00	
	Actual	2.07	0.95	1.01			1.01			3.10	3.06			3.01		1.98		1.00	
58 of 95	Expected	1.00	2.00	1.00		1.00	2.00			2.00	3.00		1.00	2.00		1.00		1.00	
	Actual	1.03	1.96	1.00		0.97	2.01			2.06	3.06		1.02	1.97		1.04		0.97	
59 of 95	Expected	3.00	1.00			1.00	3.00		1.00	2.00	2.00		2.00	2.00					
	Actual	3.04	0.96			0.97	2.98		1.00	2.07	1.95		2.08	2.03					
60 of 95	Expected	2.00	1.00			2.00	5.00		1.00	1.00	1.00		3.00				1.00		
	Actual	2.03	0.96			1.93	5.02		1.00	1.06	0.97		3.08				0.00 ^a		
61 of 95	Expected	3.00				2.00	6.00		2.00	1.00		1.00	1.00				1.00		
	Actual	3.01				2.05	5.97		1.92	1.07		0.97	0.98				0.00 ^a		
62 of 95	Expected	1.00				2.00	5.00	1.00	1.00	1.00		1.00			1.00	1.00	2.00	1.00	
	Actual	1.05				2.11	5.15	1.01	1.04	1.02		0.95			0.98	1.01	0.00 ^a	0.99	

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)
63 of 95	Expected	2.00					5.00	3.00	1.00			1.00			1.00	1.00	1.00	1.00	1.00
	Actual	2.05					5.10	3.07	1.02			0.96			0.96	1.02	0.00 ^a	1.01	1.03
64 of 95	Expected	4.00		1.00			3.00	3.00		1.00					1.00	1.00		1.00	2.00
	Actual	4.09		1.01			3.01	3.01		1.02					1.08	1.00		0.97	2.05
65 of 95	Expected	5.00		1.00		2.00	2.00	1.00		1.00	1.00				1.00	1.00			2.00
	Actual	5.10		1.02		2.09	1.98	0.98		1.04	1.03				0.95	1.02			2.06
66 of 95	Expected	3.00		2.00		2.00			2.00	1.00	3.00				1.00	2.00			1.00
	Actual	3.03		2.06		2.08			2.07	1.02	3.07				0.94	2.04			1.02
67 of 95	Expected	1.00		3.00		2.00			2.00	2.00	2.00				3.00	2.00			
	Actual	0.95		3.20		1.91			2.11	2.11	2.05				3.06	1.93			
68 of 95	Expected			4.00		2.00			1.00	3.00	3.00				2.00	1.00			1.00
	Actual			4.10		2.08			0.95	3.12	2.86				1.98	0.96			1.08
69 of 95	Expected		1.00	2.00		3.00	1.00			5.00	1.00				3.00				1.00
	Actual		0.98	2.08		3.14	0.94			5.28	1.04				2.82				1.04
70 of 95	Expected	1.00	1.00	2.00		3.00	1.00	1.00		4.00	1.00	1.00			1.00				1.00
	Actual	1.03	1.00	2.04		3.11	1.02	0.97		4.20	0.98	1.02			0.96				1.00
71 of 95	Expected	1.00	1.00	2.00		3.00	1.00	1.00	1.00	4.00		1.00			1.00				
	Actual	1.02	0.97	2.04		3.10	1.01	0.99	1.01	4.16		1.00			0.98				
72 of 95	Expected			5.00		4.00		1.00	1.00	3.00	1.00	1.00							1.00
	Actual			4.92		3.94		1.04	1.05	3.22	0.92	1.05							0.91
73 of 95	Expected	1.00	1.00	4.00		3.00			2.00	3.00	1.00					1.00			1.00
	Actual	1.00	0.99	4.02		2.86			1.99	3.10	1.05					1.01			1.02
74 of 95	Expected	1.00	1.00	3.00		3.00			2.00	2.00	1.00				2.00	1.00			1.00
	Actual	0.98	0.97	3.09		3.18			2.10	2.11	1.00				1.77	1.01			1.02
75 of 95	Expected	2.00	1.00	2.00		2.00			2.00	3.00					3.00	1.00			1.00
	Actual	2.12	0.19	2.12		1.76			1.59	4.84					2.62	0.51			1.67
76 of 95	Expected	1.00		2.00		3.00	1.00		3.00	3.00					3.00				1.00
	Actual	0.97		2.08		3.05	1.03		2.79	3.20					2.98				1.05
77 of 95	Expected			3.00		3.00	1.00	1.00	2.00	4.00					2.00				1.00
	Actual			3.17		3.23	1.06	0.99	1.79	4.27					1.95				0.98
78 of 95	Expected	1.00	1.00	2.00		3.00	1.00	1.00	2.00	4.00	1.00				1.00				
	Actual	1.05	1.02	2.06		3.11	1.02	0.99	1.78	4.24	1.04				0.96				
79 of 95	Expected	1.00	1.00	1.00		2.00	1.00	1.00		5.00	3.00	1.00		1.00	1.00				
	Actual	1.02	1.00	1.01		2.06	1.03	0.99		5.25	3.12	0.91		1.05	0.95				
80 of 95	Expected	1.00	1.00			2.00	2.00		1.00	3.00	3.00	1.00		1.00	1.00				1.00
	Actual	1.03	1.00			2.02	2.06		0.99	3.10	3.11	0.95		1.04	0.94				1.03
81 of 95	Expected	1.00		1.00	1.00	2.00	3.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00
	Actual	0.98		1.03	0.00 ^c	2.06	3.02		1.01	1.03	1.00	1.01	1.06	0.99	0.94	1.03			1.02
82 of 95	Expected	1.00		2.00	2.00	3.00	2.00	1.00	1.00		2.00		1.00			1.00			1.00
	Actual	0.99		2.02	0.00 ^c	2.96	1.98	0.97	0.99		2.01		1.06			1.03			1.01
83 of 95	Expected		1.00	2.00	3.00	2.00	1.00	1.00	1.00	1.00	2.00		1.00			2.00			
	Actual		0.97	2.04	0.00 ^c	1.99	0.99	0.97	0.98	1.02	1.99		1.06			1.74			
84 of 95	Expected	2.00	1.00	3.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00			2.00			
	Actual	2.12	1.00	3.09	0.00 ^c	0.95	1.04	0.97	1.04	1.07	0.99		0.99			1.82			
85 of 95	Expected	3.00	1.00	2.00	1.00	1.00	2.00		1.00	2.00			2.00		1.00	1.00			
	Actual	3.01	0.96	2.02	0.00 ^c	1.00	1.99		0.99	2.07			2.13		1.04	1.00			
86 of 95	Expected	2.00		2.00		1.00	2.00			2.00			3.00	1.00	2.00	2.00			
	Actual	2.02		2.02		1.06	1.99			2.07			3.12	0.96	2.04	2.02			
87 of 95	Expected	2.00		2.00		1.00	1.00		1.00	2.00			2.00	1.00	3.00	2.00			
	Actual	1.94		2.06		1.05	1.01		0.96	2.09			2.14	1.00	3.03	1.99			
88 of 95	Expected	2.00		5.00			1.00		1.00	3.00			1.00		2.00	2.00			
	Actual	1.99		5.11			0.97		1.06	3.04			1.04		1.94	1.95			
89 of 95	Expected	2.00		5.00			1.00	1.00	2.00	3.00					1.00	2.00			
	Actual	1.99		5.05			1.00	1.02	1.99	3.11					1.01	1.96			
90 of 95	Expected	1.00		5.00			1.00	1.00	1.00	3.00					1.00	2.00		2.00	
	Actual	0.99		5.01			1.01	0.99	1.00	3.10					0.99	2.03		2.03	

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 95	Expected	3.00		2.00				1.00	1.00	3.00					3.00	2.00		2.00	
	Actual	3.18		2.05				0.98	0.98	3.09					2.89	2.03		1.99	
92 of 95	Expected	4.00							2.00	2.00		1.00			3.00	2.00		1.00	1.00
	Actual	3.85							2.18	2.10		0.99			2.99	1.89		1.02	1.04
93 of 95	Expected	2.00							2.00	2.00		2.00	1.00		2.00	1.00		1.00	3.00
	Actual	N/A							N/A	N/A		N/A	N/A		N/A	N/A		N/A	N/A
94 of 95	Expected	1.00	2.00	2.00					2.00			2.00	1.00		2.00			1.00	4.00
	Actual	1.05	2.13	2.12					1.73			2.02	1.03		1.54			0.98	3.74
95 of 95	Expected		1.00	2.00	2.00				1.00	1.00		1.00			3.00			1.00	4.00
	Actual		0.98	2.07	0.00 ^c				1.01	1.08		0.95			3.01			0.95	3.94

*Crude peptides may show AAA variability

^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 completely destroyed during hydrolysis

Date: 10 MAR 2011

Signature: *Dorothy C. Young*

Title: Technical Manager, BEI Authentication or designee

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