

Peptide Array, Influenza Virus A/Thailand/4(SP-528)/2004 (H5N1) Neuraminidase Protein

Catalog No. NR-2607

This reagent is the tangible property of the U.S. Government.

Product Description: The 74-peptide array spans the neuraminidase protein of the A/Thailand/4(SP-528)/2004 (H5N1) strain of influenza virus (GenPept: AAS89006). Peptides are 15- to 17-mers, with 11 or 12 amino acid overlaps.

Lot: 334034-334107-X

The following information applies to all peptides:

- Appearance Off white lyophilized powder (Peptide 73)
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 74	05/09/06	17	1 MNPNNKIIIGSICMVT 17	1863.3	81.6%	80.2%
2 of 74	05/09/06	17	7 IITIGSICMVTGMVSLM 23	1769.3	36.7%	82.9%
3 of 74	05/17/06	17	13 ICMVTGMVSLMLQIGNL 29	1823.3	30.0%	78.6%
4 of 74	05/09/06	17	19 MVSLMLQIGNLISIWVS 35	1904.4	40.3%	84.4%
5 of 74	05/10/06	17	24 LQIGNLISIWVSHSIHT 40	1918.2	88.5%	76.0%
6 of 74	04/20/06	17	30 ISIWVSHSIHTGNQHK 46	1915.1	84.1%	81.7%
7 of 74	04/18/06	17	36 HSIHTGNQHKAEPIST 52	1871.0	93.9%	69.8%
8 of 74	04/20/06	17	42 NQHKAEPISTNFTLTK 58	1971.2	81.8%	79.8%
9 of 74	04/24/06	17	48 PISTNFTLTKAVASVK 64	1819.1	80.5%	80.3%
10 of 74	04/20/06	17	54 FLTKAVASVKLAGNSS 70	1722.0	80.2%	83.0%
11 of 74	04/20/06	17	60 VASVKLAGNSSLCPI 76	1629.9	80.8%	83.0%
12 of 74	04/21/06	17	66 AGNSSLCPIGWAVYSK 82	1767.0	94.8%	87.6%
13 of 74	05/01/06	17	72 CPIGWAVYSKDNSIRI 88	1936.2	87.7%	76.3%
14 of 74	04/20/06	17	78 AVYSKDNSIRIGSKGDV 94	1809.0	94.7%	78.7%
15 of 74	05/09/06	17	84 NSIRIGSKGDVFVIREP 100	1887.2	80.6%	76.2%
16 of 74	04/20/06	17	90 SKGDVFVIREPFISCSH 106	1921.2	87.5%	78.5%
17 of 74	04/21/06	17	96 VIREPFISCSHLECR 112	2037.4	85.4%	83.0%
18 of 74	04/24/06	17	102 ISCSHLECRFFLTQGA 118	1913.2	80.0%	75.4%
19 of 74	04/21/06	17	108 ECRTFFLTQGALLNDKH 124	1993.3	84.4%	80.0%
20 of 74	05/01/06	17	114 LTQGALLNDKHSNGTVK 130	1796.0	81.7%	75.6%

Table 1

Peptide	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Purity by HPLC ^a	Peptide Content ^b
21 of 74	05/09/06	17	120 LNDKHSNGTVKDRSPHR 136	1961.1	94.8%	69.9%
22 of 74	05/01/06	17	126 NGTVKDRSPHRTLMSCP 142	1899.2	97.4%	71.2%
23 of 74	04/21/06	17	132 RSPHRTLMSCPVGEAPS 148	1825.1	95.0%	79.4%
24 of 74	05/01/06	17	138 LMSCPVGGEAPSPYNSRF 154	1855.1	88.7%	86.8%
25 of 74	04/24/06	17	144 GEAPSPYNSRFESVAWS 160	1884.0	97.0%	84.5%
26 of 74	05/10/06	17	150 YNSRFESVAWSASACHD 166	1930.0	80.3%	79.6%
27 of 74	05/10/06	17	156 SVAWSASACHDGTSWLT 172	1778.9	91.8%	82.9%
28 of 74	05/01/06	17	162 SACHDGTSWLTIGISGP 178	1701.9	82.0%	79.1%
29 of 74	05/10/06	17	168 TSWLTIGISGPDNGAVA 184	1658.8	92.8%	84.3%
30 of 74	05/09/06	17	174 GISGPDNGAVAVLKYN 190	1631.8	81.7%	81.9%
31 of 74	05/15/06	17	180 NGAVAVLKYNGIITDTI 196	1762.0	81.2%	81.1%
32 of 74	05/01/06	17	186 LKYNIGIITDTIKSWRNN 202	2036.3	84.9%	81.8%
33 of 74	05/01/06	17	192 ITDTIKSWRNNILRTQE 208	2088.4	89.4%	82.7%
34 of 74	05/09/06	17	198 SWRNNILRTQESECACV 214	2009.3	89.3%	77.6%
35 of 74	05/12/06	17	204 LRTQESECACVNGSCFT 220	1848.1	46.2%	60.0%
36 of 74	05/12/06	17	210 ECACVNGSCFTVMTDGP 226	1734.0	80.6%	65.4%
37 of 74	05/04/06	17	216 GSCFTVMTDGPSNGQAS 232	1658.8	89.0%	63.0%
38 of 74	05/01/06	17	222 MTDGPSNGQASHKIFKM 238	1849.1	88.0%	75.2%
39 of 74	05/09/06	17	228 NGQASHKIFKMEKGKVV 244	1901.3	93.0%	65.4%
40 of 74	05/10/06	17	234 KIFKMEKGKVVKSVELD 250	1978.4	92.1%	71.5%
41 of 74	05/09/06	17	240 KGKVVKSVELDAPNYHY 256	1947.2	96.7%	71.6%
42 of 74	05/18/06	17	246 SVELDAPNYHYEEECSCY 262	2022.2	26.3%	58.4%
43 of 74	05/01/06	17	252 PNYHYEEECSCYPDAGEI 268	1990.1	80.5%	70.1%
44 of 74	05/09/06	17	258 ECSCYPDAGEITCVCRD 274	1864.1	91.5%	78.3%
45 of 74	05/12/06	17	264 DAGEITCVCRDNWHGSN 280	1877.0	64.9%	50.0%
46 of 74	04/21/06	17	270 CVCRDNWHGSNRPWVSF 286	2063.3	80.6%	83.0%
47 of 74	04/24/06	17	276 WHGSNRPWVSFNQNLEY 292	2134.3	88.1%	83.2%
48 of 74	05/09/06	16	282 PWVSFNQNLEYQIGYI 297	1971.2	90.4%	72.0%
49 of 74	05/12/06	17	287 NQNLEYQIGYICSGVFG 303	1905.1	100.0%	65.0%
50 of 74	05/10/06	17	292 YQIGYICSGVFGDNPRP 308	1886.1	87.0%	86.2%
51 of 74	05/01/06	17	298 CSGVFGDNPRPNDGTGS 314	1679.7	81.8%	81.6%
52 of 74	05/04/06	17	304 DNPRPNDGTGSCGPVSS 320	1659.7	93.1%	82.1%
53 of 74	05/01/06	17	310 DGTGSCGPVSSNGAYGV 326	1527.6	81.6%	84.4%
54 of 74	05/03/06	17	316 GPVSSNGAYGVKGFSFK 332	1701.9	93.0%	77.5%
55 of 74	05/09/06	17	322 GAYGVKGFSFKYGNVW 338	1837.1	94.0%	80.8%
56 of 74	05/03/06	17	328 GFSFKYGNVWIGRTKS 344	1904.2	88.6%	82.4%
57 of 74	05/09/06	17	334 GNGVWIGRTKSTNSRSG 350	1776.9	84.0%	81.0%
58 of 74	05/12/06	17	340 GRTKSTNSRSGFEMIWD 356	1972.2	93.1%	80.3%
59 of 74	05/15/06	17	346 NSRSGFEMIWDPNGWTE 362	2026.2	88.3%	61.9%
60 of 74	05/11/06	17	352 EMIWDPNGWTETDSSFS 368	2002.1	80.1%	86.8%

Certificate of Analysis for NR-2607

Table 1						
Peptide	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Purity by HPLC ^a	Peptide Content ^b
61 of 74	05/10/06	17	358 NGWTETDSSFSVKQDIV 374	1913.0	80.9%	81.6%
62 of 74	05/15/06	17	364 DSSFSVKQDIVAITDWS 380	1898.1	86.0%	75.4%
63 of 74	05/04/06	17	370 KQDIVAITDWSGYSGSF 386	1874.0	60.0%	71.8%
64 of 74	04/24/06	17	376 ITDWSGYSGSFVQHPEL 392	1923.1	81.0%	84.6%
65 of 74	04/20/06	17	382 YSGSFVQHPELTGLDCI 398	1866.1	81.9%	75.5%
66 of 74	04/20/06	17	387 VQHPELTGLDCIRPCFW 403	2014.4	87.5%	75.9%
67 of 74	04/20/06	17	393 TGLDCIRPCFWVELIRG 409	1978.4	92.5%	79.4%
68 of 74	05/01/06	17	399 RPCFWVELIRGRPKEST 415	2074.4	93.5%	69.9%
69 of 74	05/04/06	17	405 ELIRGRPKESTIWTSGS 421	1917.2	87.5%	77.2%
70 of 74	05/09/06	17	411 PKESTIWTSGSSISFCG 427	1787.0	80.4%	84.0%
71 of 74	05/11/06	17	417 WTSGSSISFCGVNSDTV 433	1746.9	97.0%	59.0%
72 of 74	05/16/06	17	423 ISFCGVNSDTVGSWPD 439	1870.0	85.5%	85.8%
73 of 74	05/11/06	17	429 NSDTVGSWPDGAELPF 445	1878.0	97.4%	79.4%
74 of 74	05/09/06	15	435 WSWPDGAELPFTIDK 449	1762.0	97.6%	61.0%

^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 74	Expected			2.00	1.00		1.00		4.00		2.00	2.00		1.00	1.00	2.00			1.00
	Actual			2.00	0.00 ^a		1.16		3.30 ^b		2.21	2.00		0.88	1.01	1.83			1.15
2 of 74	Expected				1.00		2.00		4.00	1.00		3.00			2.00	2.00			2.00
	Actual				0.00 ^a		1.86		2.40 ^b	1.00		2.83			1.45 ^c	1.50 ^d			1.82
3 of 74	Expected			1.00	1.00	1.00	2.00		2.00	3.00		3.00			1.00	1.00			2.00
	Actual			1.00	0.00 ^a	0.93	1.96		1.64	3.16		2.76			0.84	0.82			1.77
4 of 74	Expected			1.00		1.00	1.00		3.00	3.00		2.00			3.00		1.00		2.00
	Actual			1.15		1.00	1.10		3.41	3.30		1.97			2.72		0.00 ^e		2.36
5 of 74	Expected			1.00		1.00	1.00	2.00	4.00	2.00					3.00	1.00	1.00		1.00
	Actual			0.90		0.90	0.90	2.18	4.04	2.00					2.54	0.95	0.00 ^e		1.17
6 of 74	Expected	1.00		1.00		1.00	1.00	3.00	3.00		1.00				3.00	1.00	1.00		1.00
	Actual	1.10		1.09		1.00	1.12	2.96	2.80		1.09				2.87	0.98	0.00 ^e		1.13
7 of 74	Expected	1.00		2.00		2.00	1.00	3.00	2.00		1.00			1.00	2.00	2.00			
	Actual	1.08		2.09		2.00	1.08	2.97	1.89		1.09			1.04	1.95	1.97			
8 of 74	Expected	1.00		3.00		3.00		1.00	1.00	1.00	2.00		1.00	1.00	1.00	2.00			
	Actual	1.07		3.18		3.00		1.09	1.06	1.10	2.20		1.06	1.04	1.01	2.04			
9 of 74	Expected	2.00		2.00		1.00			1.00	1.00	2.00		1.00	1.00	2.00	2.00			2.00
	Actual	1.99		1.84		0.95			0.83	1.00	1.93		1.11	0.81	1.67	1.80			1.99
10 of 74	Expected	3.00		1.00		1.00	1.00			2.00	2.00		1.00		3.00	1.00			2.00
	Actual	3.02		0.94		0.91	1.04			2.00	1.95		1.11		2.57	0.91			2.01

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)
11 of 74	Expected	2.00		2.00	1.00		2.00		1.00	2.00	1.00			1.00	3.00				2.00
	Actual	1.82		2.00	0.00 ^a		2.07		0.99	2.08	0.97			0.91	2.52				1.56 ^f
12 of 74	Expected	2.00		2.00	1.00		2.00		1.00	1.00	1.00			1.00	3.00		1.00	1.00	1.00
	Actual	1.99		1.92	0.00 ^a		2.00		0.95	1.00	1.00			0.88	2.58		0.00 ^e	0.89	0.94
13 of 74	Expected	1.00	1.00	3.00	1.00		1.00		3.00		1.00			1.00	2.00		1.00	1.00	1.00
	Actual	1.02	1.11	3.00	0.00 ^a		1.04		2.84		1.04			0.83	1.79		0.00 ^e	0.93	0.92
14 of 74	Expected	1.00	1.00	3.00			2.00		2.00		2.00				3.00			1.00	2.00
	Actual	1.03	0.97	3.00			2.12		1.91		2.08				2.71			0.93	2.06
15 of 74	Expected		2.00	2.00		1.00	2.00		3.00		1.00		1.00	1.00	2.00				2.00
	Actual		2.17	2.00		1.08	2.19		2.83		1.13		1.05	1.06	1.55 ^c				2.16
16 of 74	Expected		1.00	1.00	1.00	1.00	1.00	1.00	2.00		1.00		2.00	1.00	3.00				2.00
	Actual		1.06	1.03	0.00 ^a	1.00	1.09	1.08	1.58 ^b		1.08		2.05	1.17	2.31 ^c				1.64 ^d
17 of 74	Expected		2.00		2.00	2.00		1.00	2.00	1.00			2.00	1.00	2.00	1.00			1.00
	Actual		1.98		0.00 ^a	1.75		0.96	1.18 ^b	1.00			2.28	1.09	1.70	0.89			0.38 ^b
18 of 74	Expected	1.00	1.00		2.00	2.00	1.00	1.00	1.00	2.00			2.00		2.00	2.00			
	Actual	0.86	1.21		0.00 ^a	2.00	0.88	1.15	0.93	2.31			2.39		1.38 ^c	2.02			
19 of 74	Expected	1.00	1.00	2.00	1.00	2.00	1.00	1.00		3.00	1.00		2.00			2.00			
	Actual	0.99	1.03	1.93	0.00 ^a	1.81	1.01	1.00		3.00	1.01		2.25			1.91			
20 of 74	Expected	1.00		3.00		1.00	2.00	1.00		3.00	2.00				1.00	2.00			1.00
	Actual	0.99		2.90		0.92	2.08	1.01		3.00	1.97				0.93	1.84			0.94
21 of 74	Expected		2.00	4.00			1.00	2.00		1.00	2.00			1.00	2.00	1.00			1.00
	Actual		2.18	4.00			1.06	2.10		1.06	2.12			0.93	1.68	0.92			1.08
22 of 74	Expected		2.00	2.00	1.00		1.00	1.00		1.00	1.00	1.00		2.00	2.00	2.00			1.00
	Actual		2.07	1.92	0.00 ^a		0.99	1.00		0.93	0.96	0.94		1.93	1.40 ^c	1.85			0.93
23 of 74	Expected	1.00	2.00		1.00	1.00	1.00	1.00		1.00		1.00		3.00	3.00	1.00			1.00
	Actual	0.99	2.08		0.00 ^a	0.90	1.00	0.98		1.00		0.98		2.90	2.17 ^c	0.91			0.98
24 of 74	Expected	1.00	1.00	1.00	1.00	1.00	1.00			1.00		1.00	1.00	3.00	3.00			1.00	1.00
	Actual	0.97	0.98	0.94	0.00 ^a	0.91	0.98			1.00		0.95	1.18	2.80	2.12 ^c			0.93	0.96
25 of 74	Expected	2.00	1.00	1.00		2.00	1.00						1.00	2.00	4.00		1.00	1.00	1.00
	Actual	2.13	1.15	1.04		2.00	1.06						1.23	2.01	3.67		0.00 ^e	1.00	1.10
26 of 74	Expected	3.00	1.00	2.00	1.00	1.00		1.00					1.00		4.00		1.00	1.00	1.00
	Actual	3.25	1.18	2.00	0.00 ^a	1.03		0.93					1.04		3.25		0.00 ^e	0.96	1.14
27 of 74	Expected	3.00		1.00	1.00		1.00	1.00		1.00					4.00	2.00	2.00		1.00
	Actual	2.70		1.00	0.00 ^a		1.02	0.97		0.93					2.72 ^c	1.57 ^d	0.00 ^e		0.87
28 of 74	Expected	1.00		1.00	1.00		3.00	1.00	2.00	1.00				1.00	3.00	2.00	1.00		
	Actual	1.00		0.99	0.00 ^a		2.69	1.00	1.94	1.02				0.84	2.64	1.76	0.00 ^e		
29 of 74	Expected	2.00		2.00			3.00		2.00	1.00				1.00	2.00	2.00	1.00		1.00
	Actual	2.04		2.00			3.17		2.02	1.05				0.92	1.62	1.78	0.00 ^e		1.03
30 of 74	Expected	2.00		3.00			4.00		1.00	1.00	1.00			1.00	1.00			1.00	2.00
	Actual	2.07		3.00			4.28		1.03	1.07	1.08			0.99	0.94			1.06	1.99

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)
31 of 74	Expected	2.00		3.00			2.00		3.00	1.00	1.00					2.00		1.00	2.00
	Actual	2.00		2.91			2.10		2.58 ^b	1.06	1.01					1.81		1.02	2.08
32 of 74	Expected		1.00	4.00			1.00		3.00	1.00	2.00				1.00	2.00	1.00	1.00	
	Actual		1.29	3.65			1.01		1.76 ^b	1.00	1.96				0.94	1.82	0.00 ^e	0.97	
33 of 74	Expected		2.00	3.00		2.00			3.00	1.00	1.00				1.00	3.00	1.00		
	Actual		2.15	3.16		2.03			2.98	1.00	1.05				1.08	2.94	0.00 ^e		
34 of 74	Expected	1.00	2.00	2.00	2.00	3.00			1.00	1.00					2.00	1.00	1.00		1.00
	Actual	1.07	2.31	2.00	0.00 ^a	2.94			1.04	1.09					1.68	0.95	0.00 ^e		1.07
35 of 74	Expected	1.00	1.00	1.00	3.00	3.00	1.00			1.00			1.00		2.00	2.00			1.00
	Actual	1.22	0.84	1.24	0.00 ^a	3.00	1.22			0.87			1.11		1.47 ^c	1.88			1.02
36 of 74	Expected	1.00		2.00	3.00	1.00	2.00					1.00	1.00	1.00	1.00	2.00			2.00
	Actual	0.86		2.00	0.00 ^a	0.87	2.16					1.02	0.98	0.97	0.80	1.94			1.69
37 of 74	Expected	1.00		2.00	1.00	1.00	3.00					1.00	1.00	1.00	3.00	2.00			1.00
	Actual	0.85		1.94	0.00 ^a	0.90	3.00					0.96	1.12	0.90	2.70	1.86			1.00
38 of 74	Expected	1.00		2.00		1.00	2.00	1.00	1.00		2.00	2.00	1.00	1.00	2.00	1.00			
	Actual	1.04		2.00		0.99	2.13	1.05	0.90		2.05	2.03	1.10	0.95	1.87	0.96			
39 of 74	Expected	1.00		1.00		2.00	2.00	1.00	1.00		4.00	1.00	1.00		1.00				2.00
	Actual	1.11		1.09		2.00	2.26	1.12	1.06		4.47	1.04	1.04		0.85				2.11
40 of 74	Expected			1.00		2.00	1.00		1.00	1.00	5.00	1.00	1.00		1.00				3.00
	Actual			1.00		1.86	1.04		0.97	1.04	5.10	0.99	1.11		0.77 ^c				3.03
41 of 74	Expected	1.00		2.00		1.00	1.00	1.00		1.00	3.00			1.00	1.00			2.00	3.00
	Actual	1.06		2.00		0.97	1.10	1.03		1.03	3.07			0.95	0.88			2.00	2.98
42 of 74	Expected	1.00		2.00	2.00	3.00		1.00		1.00				1.00	2.00			3.00	1.00
	Actual	1.00		1.50 ^g	0.00 ^a	2.81		1.04		1.12				1.07	1.77			2.91	0.96
43 of 74	Expected	1.00		2.00	2.00	3.00	1.00	1.00	1.00					2.00	1.00			3.00	
	Actual	1.00		1.85	0.00 ^a	2.63	1.08	0.92	0.97					1.99	0.80			2.85	
44 of 74	Expected	1.00	1.00	2.00	4.00	2.00	1.00		1.00					1.00	1.00	1.00		1.00	1.00
	Actual	1.09	1.10	2.00	0.00 ^a	2.09	1.16		1.00					1.22	0.80	0.80		1.02	1.03
45 of 74	Expected	1.00	1.00	4.00	2.00	1.00	2.00	1.00	1.00						1.00	1.00	1.00		1.00
	Actual	1.00	0.81	3.82	0.00 ^a	1.27	2.05	0.98	0.99						0.80	0.80	0.00 ^e		0.74 ⁱ
46 of 74	Expected		2.00	3.00	2.00		1.00	1.00					1.00	1.00	2.00		2.00		2.00
	Actual		2.50	2.39 ^g	0.00 ^a		1.00	1.00					1.08	0.81	1.73		0.00 ^e		1.92
47 of 74	Expected		1.00	3.00		2.00	1.00	1.00		1.00			1.00	1.00	2.00		2.00	1.00	1.00
	Actual		1.23	2.94		1.84	1.02	1.00		1.00			1.03	0.96	1.80		0.00 ^e	0.99	1.03
48 of 74	Expected			2.00		3.00	1.00		2.00	1.00			1.00	1.00	1.00		1.00	2.00	1.00
	Actual			1.97		3.00	1.02		1.95	1.12			1.10	1.08	1.04		0.00 ^e	2.19	1.11
49 of 74	Expected			2.00	1.00	3.00	3.00		2.00	1.00			1.00		1.00			2.00	1.00
	Actual			1.88	0.00 ^a	2.64	3.00		1.56 ^h	1.00			1.03		0.90			1.85	1.01
50 of 74	Expected		1.00	2.00	1.00	1.00	3.00		2.00				1.00	2.00	1.00			2.00	1.00
	Actual		1.04	2.12	0.00 ^a	1.00	3.22		1.80				0.88	1.89	0.88			1.89	1.06

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)
51 of 74	Expected		1.00	4.00	1.00		4.00						1.00	2.00	2.00	1.00			1.00
	Actual		1.20	4.40	0.00 ^a		4.00						1.06	2.08	2.02	1.04			0.94
52 of 74	Expected		1.00	4.00	1.00		3.00							3.00	3.00	1.00			1.00
	Actual		1.09	4.00	0.00 ^a		3.26							3.04	2.70	0.99			1.07
53 of 74	Expected	1.00		2.00	1.00		5.00							1.00	3.00	1.00		1.00	2.00
	Actual	1.17		2.19	0.00 ^a		5.00							1.06	2.65	1.06		1.09	2.38
54 of 74	Expected	1.00		1.00			4.00				2.00		2.00	1.00	3.00			1.00	2.00
	Actual	1.00		1.05			4.21				1.89		1.92	1.09	2.92			1.02	1.73
55 of 74	Expected	1.00		1.00			5.00				2.00		2.00		1.00		1.00	2.00	2.00
	Actual	1.02		1.00			5.07				2.04		2.02		0.79 ^c		0.00 ^e	1.88	2.09
56 of 74	Expected		1.00	1.00			4.00		1.00		2.00		2.00		2.00	1.00	1.00	1.00	1.00
	Actual		1.09	1.00			4.23		0.99		2.08		2.11		1.64	0.91	0.00 ^e	0.94	1.04
57 of 74	Expected		2.00	2.00			4.00		1.00		1.00				3.00	2.00	1.00		1.00
	Actual		2.21	2.00			4.20		1.00		1.06				2.39 ^c	1.79	0.00 ^e		1.00
58 of 74	Expected		2.00	2.00		1.00	2.00		1.00		1.00	1.00	1.00		3.00	2.00	1.00		
	Actual		2.17	2.00		0.98	2.05		1.01		1.04	1.05	1.00		2.28 ^c	1.72	0.00 ^e		
59 of 74	Expected		1.00	3.00		2.00	2.00		1.00			1.00	1.00	1.00	2.00	1.00	2.00		
	Actual		1.22	3.10		2.00	2.14		1.02			1.06	1.24	0.99	1.67	0.95	0.00 ^e		
60 of 74	Expected			3.00		2.00	1.00		1.00			1.00	1.00	1.00	3.00	2.00	2.00		
	Actual			3.00		1.92	1.11		1.02			1.02	1.07	1.00	2.66	1.85	0.00 ^e		
61 of 74	Expected			3.00		2.00	1.00		1.00		1.00		1.00		3.00	2.00	1.00		2.00
	Actual			3.00		1.94	1.04		0.89		1.09		1.13		2.46	1.79	0.00 ^e		2.11
62 of 74	Expected	1.00		3.00		1.00			2.00		1.00		1.00		4.00	1.00	1.00		2.00
	Actual	1.06		2.80		1.00			1.69 ^b		0.75 ⁱ		1.09		3.36	0.80	0.00 ^e		1.62 ^b
63 of 74	Expected	1.00		2.00		1.00	2.00		2.00		1.00		1.00		3.00	1.00	1.00	1.00	1.00
	Actual	0.98		2.00		0.87	1.99		2.26		0.77 ⁱ		1.08		3.08	1.08	0.00 ^e	1.18	1.07
64 of 74	Expected			1.00		2.00	2.00	1.00	1.00	1.00			1.00	1.00	3.00	1.00	1.00	1.00	1.00
	Actual			0.80		2.00	2.18	1.09	0.90	1.10			1.18	1.02	2.84	0.84	0.00 ^e	1.03	1.06
65 of 74	Expected			1.00	1.00	2.00	2.00	1.00	1.00	2.00			1.00	1.00	2.00	1.00		1.00	1.00
	Actual			1.12	0.00 ^a	2.00	2.28	1.12	0.96	2.31			1.11	1.01	2.00	1.05		0.97	1.08
66 of 74	Expected		1.00	1.00	2.00	2.00	1.00	1.00	1.00	2.00			1.00	2.00		1.00	1.00		1.00
	Actual		1.05	0.99	0.00 ^a	1.79	1.04	0.99	0.84	2.00			1.08	1.89		0.98	0.00 ^e		0.98
67 of 74	Expected		2.00	1.00	2.00	1.00	2.00		2.00	2.00			1.00	1.00		1.00	1.00		1.00
	Actual		2.20	1.05	0.00 ^a	0.86	2.02		1.80	2.00			1.02	0.97		1.06	0.00 ^e		0.89
68 of 74	Expected		3.00		1.00	2.00	1.00		1.00	1.00	1.00		1.00	2.00	1.00	1.00	1.00		1.00
	Actual		3.32		0.00 ^a	1.89	1.05		0.78 ^h	1.00	1.06		1.03	1.92	0.94	0.96	0.00 ^e		0.86
69 of 74	Expected		2.00			2.00	2.00		2.00	1.00	1.00			1.00	3.00	2.00	1.00		
	Actual		2.10			1.85	2.02		1.92	1.00	1.03			0.86	2.30 ^c	1.71	0.00 ^e		

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)
70 of 74	Expected				1.00	1.00	2.00		2.00		1.00		1.00	1.00	5.00	2.00	1.00		
	Actual				0.00 ^a	1.00	2.30		2.14		1.07		0.93	1.00	4.05 ^c	1.61	0.00 ^e		
71 of 74	Expected			2.00	1.00		2.00		1.00				1.00		5.00	2.00	1.00		2.00
	Actual			2.00	0.00 ^a		1.98		0.95				1.03		3.85 ^c	1.68	0.00 ^e		1.99
72 of 74	Expected			3.00	1.00		2.00		1.00				1.00	1.00	3.00	1.00	2.00		2.00
	Actual			2.91	0.00 ^a		2.00		0.93				0.98	0.88	2.34 ^c	0.86	0.00 ^e		1.98
73 of 74	Expected	1.00		3.00		1.00	2.00			1.00			1.00	2.00	2.00	1.00	2.00		1.00
	Actual	1.05		2.43		1.00	2.06			1.04			1.00	1.98	1.48 ^c	0.88	0.00 ^e		1.09
74 of 74	Expected	1.00		2.00		1.00	1.00		1.00	1.00	1.00		1.00	2.00	1.00	1.00	2.00		
	Actual	1.03		2.00		1.00	1.06		0.97	1.03	1.02		1.10	1.86	0.86	0.89	0.00 ^e		

^aCys was completely destroyed during hydrolysis

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

^cSer was partially destroyed during hydrolysis

^dThr was partially destroyed during hydrolysis

^eTrp was completely destroyed during hydrolysis

^fVal was partially destroyed during hydrolysis

^gAsp/Asn was partially destroyed during hydrolysis

^hIle was partially destroyed during hydrolysis

ⁱLys was partially destroyed during hydrolysis

Date: 07 MAY 2014

Signature: *Dorothy C. Young*

Title: Technical Manager, BEI Authentication or designee

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