

Peptide Array, Influenza Virus A/Uruguay/716/2007 (H3N2) Hemagglutinin Protein

Catalog No. NR-18968

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

Product Description: The 93-peptide array spans the hemagglutinin (HA) protein of the A/Uruguay/716/2007 (H3N2) strain of influenza virus (GenPept: ACD47213). Peptides are 14- or 17-mers, with 11 amino acid overlaps.

Lot: PF0720-1

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 Electrospray Ionization
- 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 ^a	Peptide Content ^b
1 of 93	A0236	05/27/2010	17	1-MKTIIALSYILCLVFAQ-17	1926.40	pass by MS	76.0%
2 of 93	A0301	06/02/2010	17	7-LSYILCLVFAQKLPGND-23	1894.07	86.9%	73.9%
3 of 93	A0028	04/28/2010	17	13-LVFAQKLPGNDNSTATL-29	1789.73	96.5%	88.7%
4 of 93	A0103	05/11/2010	17	19-LPGNDNSTATLCLGHHHA-35	1719.93	95.0%	86.3%
5 of 93	A0011	04/19/2010	17	25-STATLCLGHHAVPNGTI-41	1691.00	96.1%	86.7%
6 of 93	A0002	04/14/2010	17	31-LGHHAVPNGTIVKTITN-47	1771.27	95.1%	67.7%
7 of 93	A0045	05/03/2010	17	37-PNGTIVKTITNDQIEVT-53	1843.00	95.4%	83.4%
8 of 93	A0041	04/30/2010	17	43-KTITNDQIEVTNATELV-59	1889.13	99.9%	81.0%
9 of 93	A0046	04/30/2010	17	49-QIEVTNATELVQSSSTG-65	1762.47	95.0%	81.5%
10 of 93	A0374	06/14/2010	17	55-A TELVQSSSTGEICDSP-71	1722.60	90.2%	81.2%
11 of 93	A0001	04/13/2010	17	61-SSSTGEICDSPHQILDG-77	1744.93	97.3%	84.0%
12 of 93	A0047	04/30/2010	17	67-ICDSPHQILDGENCTLI-83	1871.09	96.3%	78.5%
13 of 93	A0116	05/14/2010	17	73-QILDGENCTLIDALLGD-89	1802.67	90.1%	77.7%
14 of 93	A0051	05/01/2010	17	79-NCTLIDALLGDPQCDGF-95	1794.73	96.8%	80.9%
15 of 93	A0003	04/15/2010	17	85-ALLGDPQCDGFQNKKWD-101	1935.53	98.2%	80.2%
16 of 93	A0169	05/18/2010	17	91-QCDGFQNKKWDLFVERS-107	2101.20	95.2%	86.9%
17 of 93	A0091	05/14/2010	17	97-NKKWDLFVERS KAYSNC-113	2088.14	95.1%	85.2%
18 of 93	A0062	05/04/2010	17	103-FVERS KAYSNCYPYDVP-119	2238.66	95.2%	77.2%
19 of 93	A0034	04/28/2010	17	109-AYSNCYPYDVPDYASLR-125	1996.27	98.7%	79.6%
20 of 93	A0022	04/22/2010	17	115-PYDVPDYASLRSLVASS-131	1839.27	95.9%	79.6%
21 of 93	A0052	05/01/2010	17	121-YASLRSLVASSGTFEFN-137	1815.07	82.6%	77.2%
22 of 93	A0048	04/30/2010	17	127-LVASSGTFEFNNEFNFN-143	1914.00	95.0%	83.2%
23 of 93	A0519	06/30/2010	17	133-TLEFNEFNFNWTGVTQN-149	2001.20	85.6%	87.3%
24 of 93	A0042	04/30/2010	17	139-ESFNWTGVTQNGTSSSC-155	1804.67	93.9%	66.6%
25 of 93	A0063	05/04/2010	17	145-GVTQNGTSSSCIRRSNN-161	1780.86	92.2%	76.2%
26 of 93	A0004	04/13/2010	17	151-TSSSCIRRSNNSFFSRL-167	1962.33	96.8%	78.4%

Table 1

Peptide	Lot #	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Purity by HPLC ^a	Peptide Content ^b
27 of 93	A0005	04/14/2010	17	157-RRSNNSFFSRLNWLTHL-173	2148.26	95.9%	80.1%
28 of 93	A0016	04/19/2010	17	163-FFSRLNWLTHLKFYPA-179	2168.14	99.5%	72.2%
29 of 93	A0006	04/15/2010	17	169-WLTHLKFYPALNVTMP-185	2060.40	95.8%	74.0%
30 of 93	A0007	04/15/2010	17	175-FKYPALNVTMPNNEKFD-191	2027.74	99.2%	86.8%
31 of 93	A0012	04/19/2010	17	181-NVTMPNNEKFDKLYIWG-197	2068.80	96.6%	74.4%
32 of 93	A0030	04/27/2010	17	187-NEKFDKLYIWGVHHPGT-203	2040.94	95.0%	76.4%
33 of 93	A0013	04/19/2010	17	193-LYIWGVHHPGTDNDQIF-209	2012.14	96.4%	75.2%
34 of 93	A0014	04/20/2010	17	199-HHPGTDNDQIFPYAQAS-215	1897.73	95.4%	80.5%
35 of 93	A0035	04/28/2010	17	205-NDQIFPYAQASGRITVS-221	1866.73	93.5%	77.8%
36 of 93	A0254	05/27/2010	17	211-YAQASGRITVSTKRSQQ-227	1881.67	97.6%	79.3%
37 of 93	A0100	05/10/2010	17	217-RITVSTKRSQQTVIPNI-233	1940.27	96.0%	67.5%
38 of 93	A0015	04/19/2010	17	223-KRSQQTVIPNIGSRPRV-239	1936.00	96.1%	73.8%
39 of 93	A0008	04/19/2010	17	229-VIPNIGSRPRVRNIPSR-245	1930.87	97.9%	81.0%
40 of 93	A0017	04/20/2010	17	235-SRPRVRNIPSRISYWT-251	2101.34	97.7%	77.7%
41 of 93	A0020	04/21/2010	17	241-NIPSRISYWTIVKPGD-257	1958.40	97.5%	85.0%
42 of 93	A0117	05/13/2010	17	247-SIYWTIVKPGDILLINS-263	1931.60	95.3%	81.0%
43 of 93	A0118	05/13/2010	17	253-VKPGDILLINSTGNLIA-269	1738.67	92.1%	81.1%
44 of 93	A0036	04/28/2010	17	259-LLINSTGNLIAPRGYFK-275	1876.67	98.6%	73.0%
45 of 93	A0018	04/20/2010	17	265-GNLIAPRGYFKIRSGKS-281	1863.93	96.4%	74.6%
46 of 93	A0053	05/03/2010	17	271-RGYFKIRSGKSSIMRSD-287	1988.93	95.5%	81.8%
47 of 93	A0021	04/21/2010	17	277-RSGKSSIMRSDAIGKC-293	1792.27	96.7%	73.0%
48 of 93	A0158	05/17/2010	17	283-IMRSDAIGKCNSECIT-299	1838.47	95.4%	80.8%
49 of 93	A0074	05/06/2010	17	289-PIGKCNSECITPNGSIP-305	1728.53	95.8%	87.5%
50 of 93	A0037	04/28/2010	17	295-SECITPNGSIPNDKPFQ-311	1846.47	98.4%	79.1%
51 of 93	A0019	04/20/2010	17	301-NGSIPNDKPFQVNRIT-317	1913.80	96.2%	77.1%
52 of 93	A0223	05/25/2010	17	307-DKPFQVNRITYGACPR-323	1978.67	90.2%	75.7%
53 of 93	A0009	04/19/2010	17	313-VNRITYGACPRYVKQNT-329	1982.80	96.2%	79.8%
54 of 93	A0064	05/04/2010	17	319-GACPRYVKQNTLKLATG-335	1820.80	92.1%	75.0%
55 of 93	A0023	04/23/2010	17	325-VKQNTLKLATGMRNVPE-341	1898.73	99.4%	79.9%
56 of 93	A0010	04/19/2010	17	331-KLATGMRNVPEKQTRGI-347	1898.53	97.4%	79.5%
57 of 93	A0024	04/23/2010	17	337-RNVPEKQTRGIFGAIAG-353	1813.47	95.7%	87.6%
58 of 93	A0288	07/15/2010	17	343-QTRGIFGAIAGFIENGW-359	1838.00	pass by MS	80.3%
59 of 93	A0265	05/29/2010	17	349-GAIAGFIENGWEGMVDG-365	1724.20	97.6%	92.5%
60 of 93	A0066	05/03/2010	17	355-IENGWEGMVDGWYGRFH-371	2053.46	97.2%	66.8%
61 of 93	A0038	04/28/2010	17	361-GMVDGWYGRFHQNSEGI-377	1952.40	97.4%	77.9%
62 of 93	A0067	05/03/2010	17	367-YGRFHQNSEGIGQAADL-383	1863.27	97.1%	77.9%
63 of 93	A0069	05/04/2010	17	373-NSEGIGQAADLKSTQAA-389	1661.00	96.4%	81.5%
64 of 93	A0054	04/30/2010	17	379-QAADLKSTQAAIDQING-395	1743.73	96.2%	75.2%
65 of 93	A0071	05/05/2010	17	385-STQAAIDQINGKLNRLI-401	1855.67	98.2%	87.3%
66 of 93	A0065	05/03/2010	17	391-DQINGKLNRLIGKTNEK-407	1941.20	98.6%	86.1%
67 of 93	A0189	05/20/2010	17	397-LNRLIGKTNEKFHQIEK-413	2069.06	96.2%	75.0%
68 of 93	A0039	04/28/2010	17	403-KTNEKFHQIEKFSEVE-419	2122.54	96.6%	70.7%
69 of 93	A0025	04/23/2010	17	409-HQIEKFSEVEGRIQDL-425	2057.20	98.0%	83.7%
70 of 93	A0026	04/23/2010	17	415-FSEVEGRIQDLEKYVED-431	2056.66	97.9%	86.4%
71 of 93	A0027	04/23/2010	17	421-RIQDLEKYVEDTKIDLW-437	2165.06	97.0%	80.4%
72 of 93	A0073	05/05/2010	17	427-KYVEDTKIDLWSYNAEL-443	2087.06	99.5%	84.2%
73 of 93	A0436	06/18/2010	17	433-KIDLWSYNAELLVALEN-449	1990.40	95.4%	73.5%

Peptide	Lot #	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Purity by HPLC ^a	Peptide Content ^b
74 of 93	A0747	07/22/2010	17	439-YNAELLVALENQHTIDL-455	1955.47	86.0%	76.4%
75 of 93	A0190	05/20/2010	17	445-VALENQHTIDLDSEMN-461	1930.40	98.2%	76.7%
76 of 93	A0040	04/28/2010	17	451-HTIDLDSEMNKLFKTK-467	2022.54	98.9%	92.3%
77 of 93	A0049	04/29/2010	17	457-DSEMKNLFEKTKKQLRE-473	2124.54	98.1%	76.9%
78 of 93	A0137	05/13/2010	17	463-LFEKTKKQLRENAEDMG-479	2037.86	97.6%	90.4%
79 of 93	A0055	04/30/2010	17	469-KQLRENAEDMGNGCFKI-485	1953.20	97.3%	86.3%
80 of 93	A0056	05/03/2010	17	475-AEDMGNGCFKIYHKCDN-491	1945.33	95.2%	83.6%
81 of 93	A0255	06/01/2010	17	481-GCFKIYHKCDNACIGSI-497	1872.27	80.1%	78.9%
82 of 93	A0256	05/28/2010	17	487-HKCDNACIGSIRNGTYD-503	1867.53	95.9%	84.4%
83 of 93	A0050	04/30/2010	17	493-CIGSIRNGTYDHDVYRD-509	1984.13	95.8%	84.4%
84 of 93	A0031	04/28/2010	17	499-NGTYDHDVYRDEALNNR-515	2051.60	97.8%	90.9%
85 of 93	A0057	04/30/2010	17	505-DVYRDEALNNRFQIKGV-521	2037.60	95.3%	82.4%
86 of 93	A0058	04/30/2010	17	511-ALNNRFQIKGVELKSGY-527	1936.33	95.6%	85.2%
87 of 93	A0075	05/07/2010	17	517-QIKGVELKSGYKDWILW-533	2064.66	95.2%	77.7%
88 of 93	A0092	05/07/2010	17	523-LKSGYKDWILWISFAIS-539	2027.20	95.4%	70.2%
89 of 93	A0909	08/12/2010	17	529-DWILWISFAISCFLLCV-545	2028.00	pass by MS	76.6%
90 of 93	A0300	06/02/2010	17	535-SFAISCFLLCVALLGFI-551	1816.40	pass by MS	74.9%
91 of 93	A0281	05/27/2010	17	541-FLLCVALLGFIMWACQK-557	1957.07	pass by MS	73.8%
92 of 93	A0082	05/07/2010	17	547-LLGFIMWACQKGNIRCN-563	1966.00	95.2%	71.6%
93 of 93	A0086	05/07/2010	14	553-WACQKGNIRCNICI-566	1621.33	98.1%	74.7%

^a% full-length
^bRemainder is salt and water

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 93	Expected	2.00			1.00	1.00			3.00	3.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
	Actual	2.36			0.00 ^c	1.20			2.70 ^b	2.96	1.02	0.98	0.92		0.99	0.96		0.95	0.96
2 of 93	Expected	1.00		2.00	1.00	1.00	1.00		1.00	4.00	1.00		1.00	1.00	1.00			1.00	1.00
	Actual	1.10		1.86	0.00 ^c	0.87	1.01		1.09	4.14	1.00		1.05	1.10	0.90			0.86	1.01
3 of 93	Expected	2.00		3.00		1.00	1.00			3.00	1.00		1.00	1.00	1.00	2.00			1.00
	Actual	2.00		3.48		1.15	0.84			2.98	0.94		0.88	0.87	0.88	1.91			1.07
4 of 93	Expected	2.00		3.00	1.00		2.00	2.00		3.00				1.00	1.00	2.00			
	Actual	2.05		3.44	0.00 ^c		1.72	1.85		3.15				0.90	0.88	2.01			
5 of 93	Expected	2.00		1.00	1.00		2.00	2.00	1.00	2.00				1.00	1.00	3.00			1.00
	Actual	2.39		1.20	0.00 ^c		1.68	1.86	1.02	2.07				0.90	0.87	2.82			1.20
6 of 93	Expected	1.00		2.00			2.00	2.00	2.00	1.00	1.00			1.00		3.00			2.00
	Actual	0.97		2.10			2.22	2.09	1.65 ^b	1.12	0.82			0.88		3.35			1.80 ^b
7 of 93	Expected			3.00		2.00	1.00		3.00		1.00			1.00		4.00			2.00
	Actual			3.35		2.01	0.91		2.73 ^b		1.08			0.96		3.90			2.07
8 of 93	Expected	1.00		3.00		3.00			2.00	1.00	1.00					4.00			2.00
	Actual	1.05		3.31		3.19			1.84	0.88	0.93					3.69			2.11

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)
9 of 93	Expected	1.00		1.00		4.00	1.00		1.00	1.00					3.00	3.00			2.00
	Actual	1.03		1.11		4.14	0.86		1.05	1.04					2.58	2.86			2.34
10 of 93	Expected	1.00		1.00	1.00	3.00	1.00		1.00	1.00				1.00	4.00	2.00			1.00
	Actual	1.05		1.18	0.00 ^c	3.32	0.87		1.04	0.98				0.95	3.57	1.88			1.17
11 of 93	Expected			2.00	1.00	2.00	2.00	1.00	2.00	1.00				1.00	4.00	1.00			
	Actual			2.39	0.00 ^c	2.16	1.91	1.11	1.77	0.84				1.03	3.70	1.08			
12 of 93	Expected			3.00	2.00	2.00	1.00	1.00	3.00	2.00				1.00	1.00	1.00			
	Actual			2.55	0.00 ^c	2.27	1.01	1.07	3.32	1.95				0.91	1.05	0.87			
13 of 93	Expected	1.00		4.00	1.00	2.00	2.00		2.00	4.00						1.00			
	Actual	1.00		4.21	0.00 ^c	2.15	1.73		1.96	3.99						0.95			
14 of 93	Expected	1.00		4.00	2.00	1.00	2.00		1.00	3.00			1.00	1.00		1.00			
	Actual	1.00		4.42	0.00 ^c	1.09	1.72		1.14	2.75			0.94	0.89		1.07			
15 of 93	Expected	1.00		4.00	1.00	2.00	2.00			2.00	2.00		1.00	1.00			1.00		
	Actual	1.13		4.37	0.00 ^c	2.34	1.65			1.92	1.83		0.90	0.86			0.00 ^a		
16 of 93	Expected		1.00	3.00	1.00	3.00	1.00			1.00	2.00		2.00		1.00		1.00		1.00
	Actual		0.82	3.46	0.00 ^c	3.45	0.81			0.97	1.78		1.78		0.81		0.00 ^a		1.12
17 of 93	Expected	1.00	1.00	3.00	1.00	1.00				1.00	3.00		1.00		2.00		1.00	1.00	1.00
	Actual	1.03	0.93	3.44	0.00 ^c	1.13				0.94	3.04		0.82		1.73		0.00 ^a	0.87	1.07
18 of 93	Expected	1.00	1.00	2.00	1.00	1.00					1.00		1.00	2.00	2.00			3.00	2.00
	Actual	0.94	0.81	2.38	0.00 ^c	1.11					1.04		0.86	1.90	1.86			3.06	2.05
19 of 93	Expected	2.00	1.00	3.00	1.00				1.00					2.00	2.00			4.00	1.00
	Actual	2.06	0.97	3.39	0.00 ^c					0.93				1.85	1.65			4.05	1.09
20 of 93	Expected	2.00	1.00	2.00						2.00				2.00	4.00			2.00	2.00
	Actual	1.68	0.98	1.88						1.92				2.24	4.18			1.96	2.16
21 of 93	Expected	2.00	1.00	1.00		1.00	1.00			3.00			1.00		4.00	1.00		1.00	1.00
	Actual	1.97	0.99	1.16		1.11	0.93			3.06			0.97		3.88	0.86		0.91	1.16
22 of 93	Expected	1.00		3.00		2.00	1.00			2.00			2.00		3.00	1.00	1.00		1.00
	Actual	1.01		3.13		2.25	0.92			2.04			1.84		2.74	0.98	0.00 ^a		1.09
23 of 93	Expected			4.00		3.00	1.00			1.00			2.00		1.00	3.00	1.00		1.00
	Actual			4.37		3.37	0.81			0.97			1.66		0.90	2.91	0.00 ^a		1.01
24 of 93	Expected			2.00	1.00	2.00	2.00						1.00		4.00	3.00	1.00		1.00
	Actual			2.24	0.00 ^c	2.32	1.84						0.88		3.73	2.88	0.00 ^a		1.12
25 of 93	Expected		2.00	3.00	1.00	1.00	2.00		1.00						4.00	2.00			1.00
	Actual		1.77	3.48	0.00 ^c	1.14	1.86		0.94						3.57	2.08			1.17
26 of 93	Expected		3.00	2.00	1.00				1.00	1.00			2.00		6.00	1.00			
	Actual		2.83	2.31	0.00 ^c				1.04	1.10			1.93		5.92	0.87			
27 of 93	Expected		3.00	3.00				1.00		3.00			2.00		3.00	1.00	1.00		
	Actual		2.80	3.36				0.94		3.38			1.92		2.65	0.94	0.00 ^a		
28 of 93	Expected	1.00	1.00	1.00				1.00		3.00	2.00		3.00	1.00	1.00	1.00	1.00	1.00	
	Actual	1.18	0.93	0.98				0.88		3.34	1.87		3.05	0.94	0.86	0.92	0.00 ^a	1.05	
29 of 93	Expected	1.00		1.00				1.00		3.00	2.00	1.00	1.00	2.00		2.00	1.00	1.00	1.00
	Actual	0.89		1.03				0.95		3.05	2.32	0.82	1.02	2.03		1.91	0.00 ^a	0.91	1.07
30 of 93	Expected	1.00		4.00		1.00				1.00	2.00	1.00	2.00	2.00		1.00		1.00	1.00
	Actual	1.11		3.99		1.10				1.05	1.98	0.89	1.86	1.82		1.07		1.00	1.14
31 of 93	Expected			4.00		1.00	1.00		1.00	1.00	2.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00
	Actual			3.61		1.10	0.91		1.02	0.96	1.97	0.87	1.18	1.19		1.03	0.00 ^a	1.05	1.10
32 of 93	Expected			2.00		1.00	2.00	2.00	1.00	1.00	2.00		1.00	1.00		1.00	1.00	1.00	1.00
	Actual			2.24		1.07	1.77	2.26	0.94	0.97	2.08		0.89	0.91		1.06	0.00 ^a	0.91	0.90
33 of 93	Expected			3.00		1.00	2.00	2.00	2.00	1.00			1.00	1.00		1.00	1.00	1.00	1.00
	Actual			3.29		1.19	1.75	2.20	1.90	0.96			0.89	0.94		1.13	0.00 ^a	0.84	0.92
34 of 93	Expected	2.00		3.00		2.00	1.00	2.00	1.00				1.00	2.00	1.00	1.00			1.00
	Actual	2.33		3.45		2.14	0.84	1.90	1.00				0.91	1.81	0.86	0.93			0.83
35 of 93	Expected	2.00	1.00	2.00		2.00	1.00		2.00				1.00	1.00	2.00	1.00		1.00	1.00
	Actual	2.39	0.95	2.25		2.22	0.82		1.88				0.85	0.92	1.84	0.90		0.82	1.16

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)
36 of 93	Expected	2.00	2.00			3.00	1.00		1.00		1.00				3.00	2.00		1.00	1.00
	Actual	2.09	1.82			3.44	0.89		1.08		1.07				2.68	2.01		0.82	1.11
37 of 93	Expected		2.00	1.00		2.00			3.00		1.00			1.00	2.00	3.00			2.00
	Actual		1.75	1.14		2.26			2.99		0.91			1.01	1.79	2.96			2.18
38 of 93	Expected		3.00	1.00		2.00	1.00		2.00		1.00			2.00	2.00	1.00			2.00
	Actual		2.75	1.11		2.34	0.90		1.93		1.00			1.94	1.86	1.04			2.13
39 of 93	Expected		4.00	2.00			1.00		3.00					3.00	2.00				2.00
	Actual		3.92	2.39			0.84		2.90					3.16	1.62				2.15
40 of 93	Expected		4.00	1.00					3.00					2.00	3.00	1.00	1.00	1.00	1.00
	Actual		3.83	1.15					3.06					2.01	2.98	0.89	0.00 ^a	0.88	1.20
41 of 93	Expected		1.00	2.00			1.00		4.00		1.00			2.00	2.00	1.00	1.00	1.00	1.00
	Actual		0.91	2.39			0.92		3.98		1.03			1.96	1.89	1.06	0.00 ^a	0.96	0.90 ^b
42 of 93	Expected			2.00			1.00		4.00	2.00	1.00			1.00	2.00	1.00	1.00	1.00	1.00
	Actual			2.16			0.89		3.94	2.23	1.00			0.98	1.78	1.13	0.00 ^a	0.90	0.99
43 of 93	Expected	1.00		3.00			2.00		3.00	3.00	1.00			1.00	1.00	1.00			1.00
	Actual	1.00		3.37			1.95		3.19	2.90	0.81			1.01	0.83	1.04			0.90
44 of 93	Expected	1.00	1.00	2.00			2.00		2.00	3.00	1.00		1.00	1.00	1.00	1.00			1.00
	Actual	1.02	0.90	2.24			1.79		2.11	3.23	0.96		0.98	0.95	0.89	1.07			0.86
45 of 93	Expected	1.00	2.00	1.00			3.00		2.00	1.00	2.00		1.00	1.00	2.00				1.00
	Actual	1.17	1.82	1.08			2.78		2.12	1.13	2.05		1.04	1.00	1.98				0.85
46 of 93	Expected		3.00	1.00			2.00		2.00		2.00	1.00	1.00		4.00				1.00
	Actual		3.34	0.86			1.95		2.07		1.81	1.05	1.17		3.60				1.15
47 of 93	Expected	1.00	2.00	1.00	1.00		2.00		2.00		2.00	1.00		1.00	4.00				
	Actual	1.09	1.89	1.07	0.00 ^c		1.90		2.19		2.08	0.85		1.01	3.93				
48 of 93	Expected	1.00	1.00	2.00	2.00	1.00	1.00		3.00		1.00	1.00		1.00	2.00	1.00			
	Actual	1.00	1.06	2.30	0.00 ^c	0.98	1.10		3.02		1.02	0.87		0.96	1.81	0.89			
49 of 93	Expected			2.00	2.00	1.00	2.00		3.00		1.00			3.00	2.00	1.00			
	Actual			2.35	0.00 ^c	1.09	1.78		3.04		1.04			3.05	1.74	0.91			
50 of 93	Expected			3.00	1.00	2.00	1.00		2.00		1.00		1.00	3.00	2.00	1.00			
	Actual			3.15	0.00 ^c	2.33	0.97		1.73		0.99		1.08	2.85	1.91	0.99			
51 of 93	Expected		1.00	5.00		1.00	1.00		2.00		1.00		1.00	2.00	1.00	1.00			1.00
	Actual		0.83	5.44		1.17	0.84		1.94		0.94		0.94	1.79	0.88	1.11			1.11
52 of 93	Expected	1.00	2.00	3.00	1.00	1.00	1.00		1.00		1.00		1.00	2.00		1.00		1.00	1.00
	Actual	0.92	2.08	3.26	0.00 ^c	1.12	1.09		0.88		0.95		0.94	1.82		1.11		0.84	1.01
53 of 93	Expected	1.00	2.00	2.00	1.00	1.00	1.00		1.00		1.00			1.00		2.00		2.00	2.00
	Actual	1.10	2.09	1.62	0.00 ^c	1.18	0.90		1.12		0.84			0.93		1.77		2.09	2.36
54 of 93	Expected	2.00	1.00	1.00	1.00	1.00	2.00			2.00	2.00			1.00		2.00		1.00	1.00
	Actual	2.05	1.14	1.03	0.00 ^c	1.07	1.83			2.17	2.14			0.92		1.88		0.82	0.95
55 of 93	Expected	1.00	1.00	2.00		2.00	1.00			2.00	2.00	1.00		1.00		2.00			2.00
	Actual	1.09	1.09	1.67		1.85	0.96			2.35	1.87	0.91		0.99		1.86			2.35
56 of 93	Expected	1.00	2.00	1.00		2.00	2.00		1.00	1.00	2.00	1.00		1.00		2.00			1.00
	Actual	1.07	2.25	1.11		2.01	1.78		1.05	0.97	2.20	0.82		0.95		1.66			1.14
57 of 93	Expected	2.00	2.00	1.00		2.00	3.00		2.00		1.00		1.00	1.00		1.00			1.00
	Actual	2.13	1.96	0.93		2.36	2.83		2.08		0.86		0.92	0.93		0.86			1.14
58 of 93	Expected	2.00	1.00	1.00		2.00	4.00		3.00				2.00			1.00	1.00		
	Actual	2.00	1.14	1.09		2.19	3.88		2.97				1.79			0.95	0.00 ^a		
59 of 93	Expected	2.00		2.00		2.00	5.00		2.00			1.00	1.00				1.00		1.00
	Actual	1.78		2.33		2.35	4.88		1.86			0.85	0.84				0.00 ^a		1.10
60 of 93	Expected		1.00	2.00		2.00	4.00	1.00	1.00			1.00	1.00				2.00	1.00	1.00
	Actual		0.86	2.36		2.39	3.81	0.86	0.98			0.81	0.97				0.00 ^a	0.82	1.14
61 of 93	Expected		1.00	2.00		2.00	4.00	1.00	1.00			1.00	1.00		1.00		1.00	1.00	1.00
	Actual		0.98	2.20		2.14	3.61	1.17	1.09			0.84	1.16		0.82		0.00 ^a	1.02	0.97
62 of 93	Expected	2.00	1.00	2.00		3.00	3.00	1.00	1.00	1.00			1.00		1.00				1.00
	Actual	2.11	1.01	2.18		2.70	2.85	1.15	1.18	1.07			0.94		0.84				0.98
63 of 93	Expected	4.00		2.00		3.00	2.00		1.00	1.00	1.00				2.00	1.00			
	Actual	4.09		2.26		3.19	1.74		1.13	1.03	1.01				1.66	0.88			

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)
64 of 93	Expected	4.00		3.00		3.00	1.00		2.00	1.00	1.00				1.00	1.00			
	Actual	3.70		3.47		3.11	0.99		2.03	0.91	1.10				0.87	0.82			
65 of 93	Expected	2.00	1.00	3.00		2.00	1.00		3.00	2.00	1.00				1.00	1.00			
	Actual	1.90	1.01	3.48		2.34	0.83		3.00	1.79	0.99				0.82	0.84			
66 of 93	Expected		1.00	4.00		2.00	2.00		2.00	2.00	3.00					1.00			
	Actual		1.11	3.85		2.23	1.83		1.93	1.87	3.21					0.96			
67 of 93	Expected		1.00	2.00		3.00	1.00	1.00	2.00	2.00	3.00		1.00			1.00			
	Actual		1.08	2.06		2.81	0.81	1.06	2.07	1.85	3.44		0.89			0.93			
68 of 93	Expected			1.00		6.00		1.00	1.00		3.00		2.00		1.00	1.00			1.00
	Actual			1.04		6.10		0.87	0.80		3.37		2.09		1.03	0.83			0.87
69 of 93	Expected		1.00	1.00		6.00	1.00	1.00	2.00	1.00	1.00		1.00		1.00				1.00
	Actual		0.83	0.90		6.37	0.93	0.81	2.14	1.09	0.81		1.02		0.94				1.16
70 of 93	Expected		1.00	2.00		5.00	1.00		1.00	1.00	1.00		1.00		1.00			1.00	2.00
	Actual		0.83	1.63		4.97	1.00		1.05	1.12	0.89		1.05		1.02			1.13	2.30
71 of 93	Expected		1.00	3.00		3.00			2.00	2.00	2.00					1.00	1.00	1.00	1.00
	Actual		0.88	3.23		3.46			1.97	1.94	1.73					0.87	0.00 ^a	0.85	1.07
72 of 93	Expected	1.00		3.00		2.00			1.00	2.00	2.00				1.00	1.00	1.00	2.00	1.00
	Actual	1.02		3.36		2.24			1.00	1.78	2.13				0.81	0.96	0.00 ^a	1.67	1.04
73 of 93	Expected		2.00	3.00		2.00			1.00	4.00	1.00				1.00		1.00	1.00	1.00
	Actual		1.83	3.45		2.17			0.91	3.91	0.84				0.99		0.00 ^a	0.83	1.07
74 of 93	Expected		2.00	3.00		3.00		1.00	1.00	4.00						1.00		1.00	1.00
	Actual		1.68	3.33		3.40		1.12	1.07	3.55						0.99		0.84	1.02
75 of 93	Expected		1.00	4.00		3.00		1.00	1.00	2.00		1.00			1.00	2.00			1.00
	Actual		0.99	4.10		2.67		1.16	1.01	2.22		0.83			0.89	2.05			1.09
76 of 93	Expected			3.00		2.00		1.00	1.00	2.00	2.00	1.00	1.00		1.00	3.00			
	Actual			2.63		2.29		0.93	0.93	1.80	2.30	1.03	1.03		1.00	3.06			
77 of 93	Expected		1.00	2.00		4.00				2.00	4.00	1.00	1.00		1.00	1.00			
	Actual		1.07	2.33		3.94				1.90	4.35	0.83	0.85		0.84	0.89			
78 of 93	Expected	1.00	1.00	2.00		4.00	1.00			2.00	3.00	1.00	1.00			1.00			
	Actual	0.92	0.98	1.93		4.27	0.81			2.15	3.32	0.82	0.96			0.82			
79 of 93	Expected	1.00	1.00	3.00	1.00	3.00	2.00		1.00	1.00	2.00	1.00	1.00						
	Actual	0.88	0.82	3.50	0.00 ^c	3.46	1.70		0.96	0.87	2.09	0.87	0.84						
80 of 93	Expected	1.00		4.00	2.00	1.00	2.00	1.00	1.00		2.00	1.00	1.00						1.00
	Actual	1.05		4.35	0.00 ^c	1.05	2.03	0.88	0.87		2.11	0.99	0.86						0.83
81 of 93	Expected	1.00		2.00	3.00		2.00	1.00	3.00		2.00		1.00		1.00				1.00
	Actual	0.87		1.94	0.00 ^c		1.96	1.03	3.20		2.34		0.92		0.85				0.90
82 of 93	Expected	1.00	1.00	4.00	2.00		2.00	1.00	2.00		1.00				1.00	1.00			1.00
	Actual	0.91	1.09	4.41	0.00 ^c		1.68	0.98	2.04		1.08				0.91	0.97			0.95
83 of 93	Expected		2.00	4.00	1.00		2.00	1.00	2.00						1.00	1.00			2.00
	Actual		2.10	3.56	0.00 ^c		2.02	0.87	2.15						0.97	0.96			2.25
84 of 93	Expected	1.00	2.00	6.00		1.00	1.00	1.00		1.00						1.00			2.00
	Actual	1.15	2.09	5.54		1.11	0.94	0.85		1.10						1.10			2.03

Date: 08 NOV 2010

Signature: *Dorothy C. Young*

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