

Peptide Array, Influenza Virus A/New York/348/2003 (H1N1) Matrix Protein 1

Catalog No. NR-2613

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Product Description: A 41-peptide array spanning the matrix protein 1 (M1) of the A/New York/348/2003 (H1N1) strain of influenza virus (GenBank: ABA12730). Peptides are 13- to 17-mers, with 11 or 12 amino acid overlaps.

Lot: N33-1 to N33-41

The following information applies to all 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 41	1/30/2006	17	1 MSLLTEVETYVLSIVPS 17	1881.23	0.98	94.9%	75.0%
2 of 41	1/30/2006	17	7 VETYVLSIVPSGPLKAE 23	1802.11	0.49	90.9%	73.0%
3 of 41	1/30/2006	17	13 SIVPSGPLKAEIAQRLE 29	1808.12	0.02	99.2%	79.0%
4 of 41	1/30/2006	17	19 PLKAEIAQRLEDVFAGK 35	1885.21	-0.22	85.1%	79.0%
5 of 41	1/30/2006	17	25 AQRLEDVFAGKNTDLEA 41	1877.06	-0.62	91.0%	81.0%
6 of 41	1/30/2006	17	31 VFAGKNTDLEALMEWLK 47	1965.32	0.01	91.1%	70.0%
7 of 41	1/30/2006	17	37 TDLEALMEWLKTRPILS 53	2016.41	-0.01	88.9%	73.0%
8 of 41	1/30/2006	17	43 MEWLKTRPILSPLTKGI 59	1983.47	-0.01	81.1%	77.0%
9 of 41	1/30/2006	17	49 RPILSPLTKGILGFVFT 65	1859.30	0.92	93.3%	80.0%
10 of 41	1/30/2006	17	55 LTKGILGFVFTLTPSE 71	1822.19	1.01	84.8%	75.0%
11 of 41	1/30/2006	17	61 GFVFTLTPSERGLQRR 77	1963.29	-0.21	96.1%	73.0%
12 of 41	1/30/2006	17	67 TVPSERGLQRRRFVQNA 83	2014.29	-1.10	93.6%	76.0%
13 of 41	1/30/2006	17	73 GLQRRRFVQNALNGNGD 89	1915.12	-1.14	91.1%	79.0%
14 of 41	1/30/2006	17	79 FVQNALNGNGDPNNMDR 95	1876.01	-1.20	87.4%	79.0%
15 of 41	1/30/2006	17	85 NGNGDPNNMDRAVKLYR 101	1934.14	-1.52	87.7%	77.0%
16 of 41	1/30/2006	17	91 NNMDRAVKLYRKLKREI 107	2147.59	-1.21	99.8%	78.0%
17 of 41	1/30/2006	17	97 VKLYRKLKREITFHGAK 113	2087.56	-0.75	88.4%	70.0%
18 of 41	1/30/2006	17	103 LKREITFHGAKEIALSY 119	1976.32	-0.16	86.5%	70.0%
19 of 41	1/30/2006	17	109 FHGAKEIALSYSAGALA 125	1705.95	0.56	93.0%	85.0%
20 of 41	1/30/2006	17	115 IALSYSAGALASCMGLI 131	1641.00	1.62	82.6%	71.0%
21 of 41	1/30/2006	17	121 AGALASCMGLIYNRMGA 137	1699.06	0.84	83.7%	82.0%
22 of 41	1/30/2006	17	127 CMGLIYNRMGAVTTESA 143	1817.15	0.39	93.4%	78.0%
23 of 41	1/30/2006	17	133 NRMGAVTTESAFGLICA 149	1741.03	0.62	90.5%	79.0%
24 of 41	1/30/2006	17	139 TTESAFGLICATCEQIA 155	1758.01	0.72	81.1%	82.0%
25 of 41	1/30/2006	17	145 GLICATCEQIADSQHKS 161	1804.05	-0.14	97.9%	79.0%

Peptide	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Hydrophilicity	Purity by HPLC ^a	Peptide Content ^b
26 of 41	1/30/2006	17	151 CEQIADSQHKSHRQMVT 167	1998.24	-1.16	85.4%	75.0%
27 of 41	1/30/2006	17	157 SQHKSHRQMVTITNPLI 173	1978.28	-0.95	91.1%	76.0%
28 of 41	1/30/2006	17	163 RQMVTITNPLIRHENRM 179	2097.47	-1.06	93.4%	76.0%
29 of 41	1/30/2006	17	169 TNPLIRHENRMVLASTT 185	1953.27	-0.42	98.7%	76.0%
30 of 41	1/30/2006	17	175 HENRMVLASTTAKAMEQ 191	1917.21	-0.62	93.6%	79.0%
31 of 41	1/30/2006	17	181 LASTTAKAMEQMAGSSE 197	1712.93	-0.22	100.0%	75.0%
32 of 41	1/30/2006	17	187 KAMEQMAGSSEQAAEAM 203	1770.00	-0.51	95.9%	72.0%
33 of 41	1/30/2006	17	193 AGSSEQAAEAMEVASQA 209	1636.72	-0.20	94.3%	79.0%
34 of 41	1/30/2006	17	199 AAEEAMEVASQARQMVQA 215	1791.05	0.01	95.6%	69.0%
35 of 41	1/30/2006	17	205 VASQARQMVQAMRAIGT 221	1818.17	0.15	83.5%	80.0%
36 of 41	1/30/2006	17	210 RQMVQAMRAIGHTPSSS 226	1857.16	-0.48	98.1%	77.0%
37 of 41	1/30/2006	17	216 MRAIGHTPSSSTGLKND 232	1771.98	-0.75	80.6%	71.0%
38 of 41	1/30/2006	17	222 HPSSSTGLKNDLLENLQ 238	1853.03	-0.85	92.9%	75.0%
39 of 41	1/30/2006	17	228 GLKNDLLENLQAYQKRM 244	2034.38	-0.95	86.0%	81.0%
40 of 41	1/30/2006	17	234 LENLQAYQKRMGVQMQR 250	2093.48	-1.07	81.1%	72.0%
41 of 41	1/30/2006	13	240 YQKRMGVQMQRFK 252	1700.08	-1.40	99.0%	75.0%

^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 41	Expected					2.00			1.00	3.00		1.00		1.00	3.00	2.00		1.00	3.00
	Actual					1.86			0.62 ^a	2.67		0.96		1.03	2.82	1.89		0.95	2.52 ^a
2 of 41	Expected	1.00				2.00	1.00		1.00	2.00	1.00			2.00	2.00	1.00		1.00	3.00
	Actual	0.82				1.92	0.93		0.67 ^a	0.97	1.01			1.88	1.94	0.86		0.94	2.48 ^a
3 of 41	Expected	2.00	1.00			3.00	1.00		2.00	2.00	1.00			2.00	2.00				1.00
	Actual	1.85	0.87			2.88	0.96		1.56 ^a	1.83	1.04			1.85	1.82				0.55 ^a
4 of 41	Expected	3.00	1.00	1.00		3.00	1.00		1.00	2.00	2.00		1.00	1.00					1.00
	Actual	3.02	1.03	1.01		2.96	0.92		1.03	1.96	2.07		0.89	1.07					0.81
5 of 41	Expected	3.00	1.00	3.00		3.00	1.00			2.00	1.00		1.00			1.00			1.00
	Actual	2.94	0.97	3.04		3.01	1.03			1.89	1.06		0.81			0.92			0.89
6 of 41	Expected	2.00		2.00		2.00	1.00			3.00	2.00	1.00	1.00			1.00	1.00		1.00
	Actual	1.91		1.93		2.05	1.06			2.83	2.00	0.85	0.83			0.96	0.00 ^b		0.82
7 of 41	Expected	1.00	1.00	1.00		2.00			1.00	4.00	1.00	1.00		1.00	1.00	2.00	1.00		
	Actual	1.05	0.94	0.86		1.89			0.81	3.85	0.97	0.92		0.81	0.89	1.87	0.00 ^b		
8 of 41	Expected		1.00			1.00	1.00		2.00	3.00	2.00	1.00		2.00	1.00	2.00	1.00		
	Actual		0.92			0.94	1.05		1.88	2.82	2.01	0.98		1.92	0.86	1.89	0.00 ^b		
9 of 41	Expected		1.00				2.00		2.00	3.00	1.00		2.00	2.00	1.00	2.00			1.00
	Actual		0.88				2.04		1.89	2.85	1.04		1.91	2.01	0.91	1.94			0.89
10 of 41	Expected					1.00	2.00		1.00	3.00	1.00		2.00	1.00	1.00	3.00			2.00
	Actual					1.03	2.01		0.89	3.01	1.01		2.03	1.03	0.94	2.87			1.89
11 of 41	Expected		3.00			2.00	2.00			2.00			2.00	1.00	1.00	2.00			2.00
	Actual		2.97			1.92	2.03			1.93			1.83	0.88	0.87	1.89			1.82
12 of 41	Expected	1.00	4.00	1.00		3.00	1.00			1.00			1.00	1.00	1.00	1.00			2.00
	Actual	1.06	3.83	1.07		2.89	1.06			1.09			0.87	1.04	0.98	0.91			1.83
13 of 41	Expected	1.00	3.00	4.00		2.00	3.00			2.00			1.00						1.00
	Actual	1.07	3.04	3.92		2.07	3.00			2.01			1.00						0.91

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)
14 of 41	Expected	1.00	1.00	7.00		1.00	2.00			1.00		1.00	1.00	1.00					1.00
	Actual	1.12	1.08	7.00		0.93	1.92			1.08		0.92	0.82	1.04					0.88
15 of 41	Expected	1.00	2.00	6.00			2.00			1.00	1.00	1.00		1.00				1.00	1.00
	Actual	1.01	2.03	5.91			1.96			0.86	0.97	0.86		1.09				0.99	0.89
16 of 41	Expected	1.00	3.00	3.00		1.00			1.00	2.00	3.00	1.00						1.00	1.00
	Actual	1.05	2.98	3.06		0.97			1.09	1.94	2.94	1.07						1.08	0.85
17 of 41	Expected	1.00	2.00			1.00	1.00	1.00	1.00	2.00	4.00		1.00			1.00		1.00	1.00
	Actual	1.00	1.99			0.91	1.03	1.04	0.88	2.02	3.94		0.92			0.94		1.08	0.87
18 of 41	Expected	2.00	1.00			2.00	1.00	1.00	2.00	2.00	2.00		1.00		1.00	1.00		1.00	
	Actual	1.94	1.04			1.95	1.09	1.03	1.90	2.04	1.92		0.89		0.91	0.96		1.06	
19 of 41	Expected	5.00				1.00	2.00	1.00	1.00	2.00	1.00		1.00		2.00			1.00	
	Actual	5.00				1.08	1.86	0.85	1.13	1.87	1.10		0.89		1.94			1.06	
20 of 41	Expected	4.00			1.00		2.00		2.00	3.00		1.00			3.00			1.00	
	Actual	3.93			0.59 ^c		2.03		2.00	2.85		0.95			2.90			1.01	
21 of 41	Expected	4.00	1.00	1.00	1.00		3.00		1.00	2.00		2.00			1.00			1.00	
	Actual	4.01	0.97	1.04	0.57 ^c		3.00		0.89	1.84		2.10			0.93			0.94	
22 of 41	Expected	2.00	1.00	1.00	1.00	1.00	2.00		1.00	1.00		2.00			1.00	2.00		1.00	1.00
	Actual	2.00	1.01	1.04	0.61 ^c	0.92	2.09		0.84	0.97		2.10			0.87	1.93		0.95	0.96
23 of 41	Expected	3.00	1.00	1.00	1.00	1.00	2.00		1.00	1.00		1.00	1.00		1.00	2.00			1.00
	Actual	3.00	0.98	0.98	0.51 ^c	0.98	2.04		0.83	0.86		1.08	0.98		0.96	1.86			0.95
24 of 41	Expected	3.00			2.00	3.00	1.00		2.00	1.00			1.00		1.00	3.00			
	Actual	3.00			0.99 ^c	2.89	1.03		1.89	0.87			1.03		0.96	2.92			
25 of 41	Expected	2.00		1.00	2.00	3.00	1.00	1.00	2.00	1.00	1.00				2.00	1.00			
	Actual	2.08		1.03	1.08 ^c	3.06	0.94	0.99	1.84	0.96	0.92				1.86	0.86			
26 of 41	Expected	1.00	1.00	1.00	1.00	4.00		2.00	1.00		1.00	1.00			2.00	1.00			1.00
	Actual	0.91	0.90	1.00	0.52 ^c	3.80		1.87	1.02		0.99	0.89			1.98	0.96			0.92
27 of 41	Expected		1.00	1.00		2.00		2.00	1.00	1.00	1.00	1.00		1.00	2.00	3.00			1.00
	Actual		1.05	1.00		2.03		1.81	0.93	0.90	1.19	0.93		1.04	1.91	2.87			0.91
28 of 41	Expected		3.00	2.00		2.00		1.00	1.00	1.00		2.00		1.00		3.00			1.00
	Actual		2.87	2.02		2.05		0.87	0.82	1.10		1.98		1.02		2.83			0.92
29 of 41	Expected	1.00	2.00	2.00		1.00		1.00	1.00	2.00		1.00		1.00	1.00	3.00			1.00
	Actual	1.02	1.88	1.91		1.11		0.98	0.82	1.84		0.92		1.01	0.91	2.87			0.94
30 of 41	Expected	3.00	1.00	1.00		3.00		1.00		1.00	1.00	2.00			1.00	2.00			1.00
	Actual	2.97	1.05	1.07		3.00		0.91		0.87	1.02	1.90			0.93	1.95			0.85
31 of 41	Expected	4.00				3.00	1.00			1.00	1.00	2.00			3.00	2.00			
	Actual	3.87				3.00	1.04			0.93	0.96	1.89			2.88	1.87			
32 of 41	Expected	5.00				5.00	1.00				1.00	3.00			2.00				
	Actual	4.89				4.92	1.09				0.98	2.90			1.93				
33 of 41	Expected	6.00				5.00	1.00					1.00			3.00				1.00
	Actual	5.89				5.09	1.02					1.06			2.85				0.84
34 of 41	Expected	6.00	1.00			5.00						2.00			1.00				2.00
	Actual	5.82	1.07			4.96						2.03			0.95				1.86
35 of 41	Expected	4.00	2.00			3.00	1.00		1.00			2.00			1.00	1.00			2.00
	Actual	3.89	2.07			3.04	0.98		1.06			2.01			0.91	0.89			1.84
36 of 41	Expected	2.00	2.00			2.00	1.00	1.00	1.00			2.00		1.00	3.00	1.00			1.00
	Actual	1.93	2.07			1.89	0.98	0.92	1.06			2.03		1.07	2.87	0.85			0.91
37 of 41	Expected	1.00	1.00	2.00			2.00	1.00	1.00	1.00	1.00	1.00		1.00	3.00	2.00			
	Actual	1.03	1.03	2.09			1.91	0.89	1.01	0.92	0.95	1.00		1.02	2.94	1.93			
38 of 41	Expected			3.00		2.00	1.00	1.00		4.00	1.00			1.00	3.00	1.00			
	Actual			2.90		2.00	0.98	1.02		3.89	0.93			0.92	2.89	0.91			

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)
39 of 41	Expected	1.00	1.00	3.00		3.00	1.00			4.00	2.00	1.00						1.00	
	Actual	1.08	1.03	3.03		3.00	1.04			3.91	1.82	1.01						0.95	
40 of 41	Expected	1.00	2.00	1.00		5.00	1.00			2.00	1.00	2.00						1.00	1.00
	Actual	1.03	1.93	1.09		5.92	1.03			2.09	0.99	1.90						1.04	0.88
41 of 41	Expected		2.00			3.00	1.00				2.00	2.00	1.00					1.00	1.00
	Actual		2.03			3.00	1.12				2.15	1.89	1.01					1.01	0.82
^a Val-Ile, Val-Val, Ile-Ile and/or Ile-Val bonds were only partially destroyed during hydrolysis																			
^b Trp was completely destroyed during hydrolysis																			
^c Cys was partially destroyed during hydrolysis																			

Date: 16 JUN 2014

Signature: *Dorothy C. Young*

Title: Technical Manager, BEI Authentication or designee

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