

**Peptide Array, Influenza Virus A/New York/444/2001 (H1N1) Nonstructural Protein 1**

**Catalog No. NR-2612**

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**Product Description:** A 37-peptide array spanning the nonstructural protein 1 (NS1) of the A/New York/444/2001 (H1N1) strain of influenza virus (GenBank: ABA42580). Peptides are 15- to 17-mers, with 11 or 12 amino acid overlaps.

**Lot: N32-1 to N32-37**

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 <sup>a</sup>	Peptide Content <sup>b</sup>
1 of 37	1/30/2006	17	1 MDSHTVSSFQVDCFLWH 17	2039.29	0.08	99.8%	74.0%
2 of 37	1/30/2006	17	7 SSFQVDCFLWHVRKQVA 23	2050.39	0.10	93.7%	76.0%
3 of 37	1/30/2006	17	13 CFLWHVRKQVADQDLGD 29	2030.31	-0.43	88.1%	75.0%
4 of 37	1/30/2006	17	19 RKQVADQDLGDAPFLDR 35	1944.15	-1.04	89.3%	78.0%
5 of 37	1/30/2006	17	24 DQDLGDAPFLDRLRRDQ 40	2030.20	-1.41	93.1%	78.0%
6 of 37	1/30/2006	17	30 APFLDRLRRDQKSLKGR 46	2056.42	-1.36	90.0%	74.0%
7 of 37	1/30/2006	17	36 LRRDQKSLKGRGSTLGL 52	1885.22	-0.98	92.7%	75.0%
8 of 37	1/30/2006	17	42 SLKGRGSTLGLNIETAT 58	1717.95	-0.15	95.9%	74.0%
9 of 37	1/30/2006	17	48 STLGLNIETATCVGKQI 64	1748.04	0.41	83.9%	71.0%
10 of 37	1/30/2006	17	54 IETATCVGKQIVERILK 70	1901.32	0.32	82.9%	68.0%
11 of 37	1/30/2006	17	60 VGKQIVERILKEESDEA 76	1943.20	-0.68	85.1%	79.0%
12 of 37	1/30/2006	17	66 ERILKEESDEAFKMTMA 82	2028.35	-0.75	88.2%	78.0%
13 of 37	1/30/2006	17	72 ESDEAFKMTMASALASR 88	1845.10	-0.26	95.5%	71.0%
14 of 37	1/30/2006	17	78 KMTMASALASRYLTDMT 94	1891.27	0.11	90.2%	76.0%
15 of 37	1/30/2006	17	84 ALASRYLTDMTIEEMSR 100	1987.30	-0.25	84.5%	72.0%
16 of 37	1/30/2006	17	90 LTDMTIEEMSRDWFMLM 106	2149.57	0.05	88.7%	74.0%
17 of 37	1/30/2006	17	96 EEMSRDWFMLMPKQKVA 112	2126.56	-0.66	94.5%	72.0%
18 of 37	1/30/2006	17	102 WFMLMPKQKVAGPLCVR 118	2004.57	0.39	96.8%	70.0%
19 of 37	1/30/2006	17	108 KQKVAGPLCVRMDQAIM 124	1888.36	0.11	100.0%	73.0%
20 of 37	1/30/2006	17	114 PLCVRMDQAIMDKNIIL 130	1973.47	0.55	96.8%	84.0%
21 of 37	1/30/2006	17	120 DQAIMDKNIILKANFSV 136	1920.28	0.22	89.3%	73.0%
22 of 37	1/30/2006	17	126 KNIILKANFSVIFDRLE 142	2020.42	0.33	98.4%	72.0%
23 of 37	1/30/2006	17	132 ANFSVIFDRLETLLLR 148	2008.37	0.56	96.2%	79.0%
24 of 37	1/30/2006	17	138 FDRLETLLLRRAFTEEG 154	2011.28	-0.17	85.1%	77.0%
25 of 37	1/30/2006	17	144 LTLRAFTEEGAIVGEI 160	1832.14	0.81	83.7%	80.0%

Peptide	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Hydrophilicity	Purity by HPLC <sup>a</sup>	Peptide Content <sup>b</sup>
26 of 37	1/30/2006	17	150 FTEEGAIVGEISPLPSL 166	1759.00	0.51	93.8%	71.0%
27 of 37	1/30/2006	17	156 IVGEISPLPSLPGHTNE 172	1759.99	-0.05	89.1%	80.0%
28 of 37	1/30/2006	17	162 PLPSLPGHTNEDVKNAI 178	1802.03	-0.57	86.2%	81.0%
29 of 37	1/30/2006	17	168 GHTNEDVKNAIGVLIGG 184	1693.89	-0.02	92.5%	75.0%
30 of 37	1/30/2006	17	174 VKNAIGVLIGGLEWNDN 190	1812.07	0.19	80.4%	79.0%
31 of 37	1/30/2006	17	180 VLIGGLEWNDNTRVSE 196	1901.12	-0.03	81.0%	76.0%
32 of 37	1/30/2006	17	186 EWNDNTRVRSVETLQRFA 202	2065.25	-0.96	88.4%	70.0%
33 of 37	1/30/2006	17	192 VRVSETLQRFARSSNE 208	2065.29	-0.86	83.4%	79.0%
34 of 37	1/30/2006	17	198 LQRFARSSNETGGPPF 214	1950.16	-0.91	80.8%	77.0%
35 of 37	1/30/2006	17	204 RSSNETGGPPFTPTQKR 220	1860.03	-1.76	90.0%	82.0%
36 of 37	1/30/2006	17	210 GGPPFTPTQKRKMAGTI 226	1787.13	-0.76	99.9%	80.0%
37 of 37	1/30/2006	15	216 PTQKRKMAGTIRSEV 230	1702.02	-1.04	80.1%	73.0%

<sup>a</sup>% full-length  
<sup>b</sup>Remainder 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 37	Expected			2.00	1.00	1.00		2.00		1.00		1.00	2.00		3.00	1.00	1.00		2.00
	Actual			2.00	0.49 <sup>a</sup>	1.01		1.69		0.83		1.06	1.94		2.82	0.76	0.00 <sup>b</sup>		1.78
2 of 37	Expected	1.00	1.00	1.00	1.00	2.00		1.00		1.00	1.00		2.00		2.00		1.00		3.00
	Actual	1.04	0.94	1.07	0.58 <sup>a</sup>	2.09		0.88		1.13	1.15		2.08		2.12		0.00 <sup>b</sup>		2.88
3 of 37	Expected	1.00	1.00	3.00	1.00	2.00	1.00	1.00		2.00	1.00		1.00				1.00		2.00
	Actual	0.98	0.89	3.00	0.51 <sup>a</sup>	2.08	0.89	0.79		1.81	0.95		0.89				0.00 <sup>b</sup>		1.68
4 of 37	Expected	2.00	2.00	4.00		2.00	1.00			2.00	1.00		1.00	1.00					1.00
	Actual	1.88	1.93	4.00		2.01	1.11			1.83	0.92		0.87	1.10					0.87
5 of 37	Expected	1.00	3.00	5.00		2.00	1.00			3.00			1.00	1.00					
	Actual	1.01	2.77	5.06		2.03	0.93			2.78			0.90	0.95					
6 of 37	Expected	1.00	4.00	2.00		1.00	1.00			3.00	2.00		1.00	1.00	1.00				
	Actual	1.07	3.92	2.00		0.92	0.95			2.78	1.76		0.89	0.99	0.92				
7 of 37	Expected		3.00	1.00		1.00	3.00			4.00	2.00				2.00	1.00			
	Actual		2.82	1.06		0.93	2.98			3.72	1.89				1.94	0.89			
8 of 37	Expected	1.00	1.00	1.00		1.00	3.00		1.00	3.00	1.00				2.00	3.00			
	Actual	0.98	1.07	1.01		0.85	2.86		0.88	2.73	1.10				1.87	3.01			
9 of 37	Expected	1.00		1.00	1.00	2.00	2.00		2.00	2.00	1.00				1.00	3.00			1.00
	Actual	1.10		0.91	0.57 <sup>a</sup>	1.93	1.83		1.81	1.79	1.00				0.89	2.75			0.74
10 of 37	Expected	1.00	1.00		1.00	3.00	1.00		3.00	1.00	2.00					2.00			2.00
	Actual	1.10	0.98		0.66 <sup>a</sup>	2.75	0.86		1.38 <sup>c</sup>	1.03	2.00					1.87			1.45 <sup>c</sup>
11 of 37	Expected	1.00	1.00	1.00		5.00	1.00		2.00	1.00	2.00				1.00				2.00
	Actual	1.04	0.92	1.18		5.02	0.97		1.28 <sup>c</sup>	0.93	1.81				1.14				1.53 <sup>c</sup>
12 of 37	Expected	2.00	1.00	1.00		4.00			1.00	1.00	2.00	2.00	1.00		1.00	1.00			
	Actual	1.92	0.85	0.89		4.03			0.81	0.92	1.71	1.78	0.88		0.99	0.95			
13 of 37	Expected	4.00	1.00	1.00		2.00				1.00	1.00	2.00	1.00		3.00	1.00			
	Actual	4.00	0.92	0.89		2.03				0.94	0.85	1.63	0.79		2.89	0.77			
14 of 37	Expected	3.00	1.00	1.00						2.00	1.00	3.00			2.00	3.00			1.00
	Actual	3.00	0.89	0.79						2.02	0.78	2.65			1.94	2.63			1.01
15 of 37	Expected	2.00	2.00	1.00		2.00			1.00	2.00		2.00			2.00	2.00			1.00
	Actual	1.75	1.93	0.82		1.69			0.88	1.86		1.75			1.91	1.24			0.90

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)
16 of 37	Expected		1.00	2.00		2.00			1.00	2.00		4.00	1.00		1.00	2.00	1.00		
	Actual		0.88	1.89		1.79			0.82	1.89		4.02	0.89		0.88	1.71	0.00 <sup>b</sup>		
17 of 37	Expected	1.00	1.00	1.00		3.00				1.00	2.00	3.00	1.00	1.00	1.00		1.00		1.00
	Actual	0.93	0.91	0.77		2.71				0.93	1.68	3.05	0.83	0.81	0.93		0.00 <sup>b</sup>		0.88
18 of 37	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	0.92	0.89		0.58 <sup>a</sup>	0.90	1.12			2.00	1.78	2.02	0.78	2.11			0.00 <sup>b</sup>		1.76
19 of 37	Expected	2.00	1.00	1.00	1.00	2.00	1.00		1.00	1.00	2.00	2.00		1.00					2.00
	Actual	1.76	0.89	1.04	0.57 <sup>a</sup>	1.73	1.00		0.89	1.06	1.78	1.84		1.06					1.66
20 of 37	Expected	1.00	1.00	3.00	1.00	1.00			3.00	2.00	1.00	2.00		1.00					1.00
	Actual	0.95	0.84	2.73	0.60 <sup>a</sup>	0.87			1.74 <sup>c</sup>	1.66	1.00	1.65		1.09					0.77
21 of 37	Expected	2.00		4.00		1.00			3.00	1.00	2.00	1.00	1.00		1.00				1.00
	Actual	1.92		4.00		0.79			1.66 <sup>c</sup>	0.75	1.70	0.77	1.00		0.85				0.92
22 of 37	Expected	1.00	1.00	3.00		1.00			3.00	2.00	2.00		2.00		1.00				1.00
	Actual	0.92	0.98	2.82		1.00			1.22 <sup>c</sup>	1.64	1.85		1.77		0.79				0.56 <sup>c</sup>
23 of 37	Expected	1.00	2.00	2.00		1.00			1.00	4.00			2.00		1.00	2.00			1.00
	Actual	0.96	1.97	2.11		1.00			0.55 <sup>c</sup>	3.09			2.02		0.90	1.56			0.68 <sup>c</sup>
24 of 37	Expected	1.00	2.00	1.00		3.00	1.00			4.00			2.00			3.00			
	Actual	1.13	2.00	1.01		3.00	1.00			3.67			2.08			2.71			
25 of 37	Expected	2.00	1.00			3.00	2.00		2.00	3.00			1.00			2.00			1.00
	Actual	2.07	0.92			3.00	2.01		1.15 <sup>c</sup>	2.50			1.09			1.65			0.67 <sup>c</sup>
26 of 37	Expected	1.00				3.00	2.00		2.00	2.00			1.00	2.00	2.00	1.00			1.00
	Actual	1.02				2.63	2.00		1.03 <sup>c</sup>	1.65			1.05	1.95	1.73	0.72			0.55 <sup>c</sup>
27 of 37	Expected			1.00		2.00	2.00	1.00	2.00	2.00				3.00	2.00	1.00			1.00
	Actual			0.85		1.80	1.69	1.02	0.98 <sup>c</sup>	1.75				3.00	1.81	0.83			0.62 <sup>c</sup>
28 of 37	Expected	1.00		3.00		1.00	1.00	1.00	1.00	2.00	1.00			3.00	1.00	1.00			1.00
	Actual	0.89		2.83		0.90	0.89	1.02	1.02	1.68	0.94			2.81	0.87	0.77			0.81
29 of 37	Expected	1.00		3.00		1.00	4.00	1.00	2.00	1.00	1.00					1.00			2.00
	Actual	1.05		3.04		0.99	4.00	1.13	1.99	0.82	0.83					0.90			1.74
30 of 37	Expected	1.00		4.00		1.00	3.00		2.00	2.00	1.00						1.00		2.00
	Actual	1.04		4.00		0.98	3.07		2.04	1.81	1.08						0.00 <sup>b</sup>		1.65
31 of 37	Expected		1.00	3.00		2.00	2.00		1.00	2.00					1.00	1.00	1.00		3.00
	Actual		0.88	2.85		2.00	1.78		0.95	1.59					0.86	0.72	0.00 <sup>b</sup>		2.69
32 of 37	Expected	1.00	2.00	3.00		3.00				1.00			1.00		1.00	2.00	1.00		2.00
	Actual	1.00	1.73	2.98		3.13				0.72			1.00		1.05	1.69	0.00 <sup>b</sup>		1.59
33 of 37	Expected	1.00	3.00	1.00		3.00				1.00			1.00		3.00	1.00	1.00		2.00
	Actual	1.06	2.75	0.97		2.99				0.77			1.13		3.00	0.91	0.00 <sup>b</sup>		1.76
34 of 37	Expected	1.00	2.00	1.00		2.00	2.00			1.00			2.00	2.00	2.00	1.00	1.00		
	Actual	1.12	1.71	1.10		2.13	2.04			0.89			2.05	2.00	2.17	1.06	0.00 <sup>b</sup>		
35 of 37	Expected		2.00	1.00		2.00	2.00				1.00		1.00	3.00	2.00	3.00			
	Actual		2.08	1.00		1.89	2.00				0.81		1.08	2.99	2.02	2.77			
36 of 37	Expected	1.00	1.00			1.00	3.00		1.00		2.00	1.00	1.00	3.00		3.00			
	Actual	1.00	0.81			0.83	3.00		0.92		1.69	1.00	1.09	2.74		2.49			
37 of 37	Expected	1.00	2.00			2.00	1.00		1.00		2.00	1.00		1.00	1.00	2.00			1.00
	Actual	1.03	1.79			1.65	1.00		0.84		2.01	0.90		0.99	0.86	1.55			0.92

<sup>a</sup>Cys was partially destroyed during hydrolysis

<sup>b</sup>Trp was completely destroyed during hydrolysis

<sup>c</sup>Val-Ile, Val-Val, Ile-Ile and/or Ile-Val bonds were only partially destroyed during hydrolysis

**Date:** 10 JUN 2014

**Signature:** *Dorothy C. Young*

**Title:** Technical Manager, BEI Authentication or designee

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