

**Peptide Array, Influenza Virus A/Wyoming/03/2003 (H3N2) Hemagglutinin Protein Diverse Peptides**

**Catalog No. NR-9474**

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**Product Description:** NR-9474 contains 24 peptides that represent regions of amino acid sequence diversity in the hemagglutinin (HA) protein of influenza virus A/Wyoming/03/2003 (H3N2) (GenPept: AAT08000) compared to the HA of influenza virus A/Wisconsin/67e5/2005 (H3N2) (GenPept: ABO37599). Peptides are 15- to 17-mers, with 11 or 12 amino acid overlaps.

**Lot: P984151**

The following information applies to all peptides:

- Appearance Lyophilized powder
- Mass spectral analysis Correct MW by Electrospray (Peptides 25, 33, 34, 63)
- Counter ion Correct MW by MALDI-TOF (all other Peptides)
- 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 <sup>a</sup>	Peptide Content <sup>b</sup>
20 of 94	2/7/2008	16	109 LRSLVASSGTLEFNNE 124	1737	nd <sup>c</sup>	65.98
21 of 94	1/21/2008	17	114 ASSGTLEFNNEFNFNWAG 130	1831	81	80.61
22 of 94	1/3/2008	17	119 LEFNNEFNFNWAGVTQNG 135	1927	82	75.27
23 of 94	12/13/2007	17	125 SFNWAGVTQNGTSSACK 141	1758	90	87.11
24 of 94	11/6/2007	16	131 VTQNGTSSACKRRSNK 146	1737	100	66.82
25 of 94	11/29/2007	17	136 TSSACKRRSNKSFFSRL 152	1975	98	72.95
26 of 94	12/19/2007	17	142 RRSNKSFFSRLNWLTHL 158	2162	100	46.60
27 of 94	12/17/2007	17	148 FFSRLNWLTHLKYKYP 164	2185	99	79.57
28 of 94	12/19/2007	16	154 WLTHLKYKYPALNVTM 169	1978	95	75.00
29 of 94	12/21/2007	17	159 KYKYPALNVTMPNNEKF 175	2057	100	80.78
31 of 94	12/26/2007	17	171 NNEKFDKLYIWGVHHPV 187	2096	97	83.83
32 of 94	12/31/2007	17	177 KLYIWGVHHPVTDSQI 193	2008	95	84.74
33 of 94	11/30/2007	17	183 VHHPVTDSQISLYAQA 199	1881	100	84.31

Peptide	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Purity by HPLC <sup>a</sup>	Peptide Content <sup>b</sup>
34 of 94	12/27/2007	17	189 DNDQISLYAQASGRITV 205	1851	~75	82.65
37 of 94	12/18/2007	17	207 TKRSQQTVIPNIGYRPR 223	2014	97	74.50
38 of 94	11/28/2007	15	213 TVIPNIGYRPRVRDI 227	1769	100	72.48
39 of 94	11/29/2007	17	217 NIGYRPRVRDISSRISI 233	2002	100	76.22
40 of 94	12/6/2007	17	223 RVRDISSRISIIYWTIVK 239	2092	100	83.40
62 of 94	12/10/2007	17	348 VDGWYGFRRHQNSEGTGQ 364	1938	83	79.24
63 of 94	11/29/2007	16	354 FRHQNSEGTGQAADLK 369	1759	95	81.22
64 of 94	12/5/2007	17	359 SEGTGQAADLKSTQAAI 375	1648	96	88.90
82 of 94	12/11/2007	17	466 GCFKIYHKCDNACIESI 482	1944	98	58.90
83 of 94	11/17/2008	17	472 HKCDNACIESIRNGTYD 488	1939	83	73.60
84 of 94	12/3/2007	17	478 CIESIRNGTYDHDVYRD 494	2056	81	80.01

<sup>a</sup>% full-length

<sup>b</sup>Remainder is salt & water

<sup>c</sup>nd; not done due to hydrophobic nature of the peptide

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)
20 of 94	Expected	1.00	1.00	2.00		2.00	1.00			3.00			1.00		3.00	1.00			1.00
	Actual	1.02	1.03	2.09		2.01	1.04			2.93			1.07		2.78	0.95			0.86
21 of 94	Expected	2.00		3.00		2.00	2.00			1.00			2.00		3.00	1.00	1.00		
	Actual	2.00		2.75		2.07	2.06			1.03			2.11		2.89	0.99	0.00 <sup>b</sup>		
22 of 94	Expected	1.00		4.00		3.00	2.00			1.00			2.00		1.00	1.00			1.00
	Actual	1.08		3.73		3.05	1.95			1.07			2.18		0.98	0.89			1.00
23 of 94	Expected	2.00		2.00	1.00	1.00	2.00				1.00		1.00		3.00	2.00	1.00		1.00
	Actual	2.11		2.01	0.00 <sup>a</sup>	1.01	2.12				0.97		1.04		2.90	2.02	0.00 <sup>b</sup>		0.97
24 of 94	Expected	1.00	2.00	2.00	1.00	1.00	1.00				2.00				3.00	2.00			1.00
	Actual	1.10	2.14	1.97	0.00 <sup>a</sup>	0.95	1.05				2.06				2.96	1.93			0.99
25 of 94	Expected	1.00	3.00	1.00	1.00					1.00	2.00		2.00		5.00	1.00			
	Actual	1.02	3.18	1.05	0.00 <sup>a</sup>					1.01	2.15		2.11		4.82	0.89			
26 of 94	Expected		3.00	2.00				1.00		3.00	1.00		2.00		3.00	1.00	1.00		
	Actual		2.99	2.00				1.02		3.24	0.93		2.16		2.89	0.94	0.00 <sup>b</sup>		
27 of 94	Expected	1.00	1.00	1.00				1.00		3.00	2.00		2.00	1.00	1.00	1.00	1.00	1.00	2.00
	Actual	1.00	1.06	0.95				1.06		3.15	2.04		2.09	0.92	1.01	0.96	0.00 <sup>b</sup>	2.06	
28 of 94	Expected	1.00		1.00				1.00		3.00	2.00	1.00		1.00		2.00	1.00	2.00	1.00
	Actual	1.01		1.01				1.02		3.04	1.88	0.93		1.05		2.02	0.00 <sup>b</sup>	2.05	1.04
29 of 94	Expected	1.00		3.00		1.00				1.00	3.00	1.00	1.00	2.00		1.00			2.00
	Actual	1.00		3.11		1.04				1.00	2.74	0.92	1.07	1.95		1.03			2.04
31 of 94	Expected			3.00		1.00	1.00	2.00	1.00	1.00	2.00		1.00	1.00				1.00	1.00
	Actual			2.72		1.01	1.08	1.94	1.01	1.05	1.91		0.98	0.98				0.00 <sup>b</sup>	1.04
32 of 94	Expected			2.00		1.00	1.00	2.00	2.00	1.00	1.00			1.00	1.00	1.00	1.00	1.00	2.00
	Actual			1.88		1.09	0.98	1.80	1.88	1.07	1.06			1.05	1.00	1.00	0.00 <sup>b</sup>	1.08	1.86
33 of 94	Expected	2.00		2.00		2.00		2.00	1.00	1.00				1.00	2.00	1.00			1.00
	Actual	1.89		2.13		1.96		2.03	1.07	1.08				0.96	1.88	0.87			1.06
34 of 94	Expected	2.00	1.00	3.00		2.00	1.00		2.00	1.00					2.00	1.00			1.00
	Actual	1.93	0.98	3.11		1.89	1.07		2.15	1.05					2.11	0.97			1.06
37 of 94	Expected		3.00	1.00		2.00	1.00		2.00		1.00			2.00	1.00	2.00			1.00
	Actual		3.19	1.05		2.01	1.06		1.97		0.93			1.98	0.90	1.91			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)
38 of 94	Expected		3.00	2.00			1.00		3.00					2.00		1.00		1.00	2.00
	Actual		3.12	2.08			1.06		2.95					2.09		0.94		1.04	1.80
39 of 94	Expected		4.00	2.00			1.00		4.00					1.00	3.00			1.00	1.00
	Actual		4.17	2.04			1.02		4.23					0.95	3.01			0.99	1.00
40 of 94	Expected		3.00	1.00					4.00		1.00				3.00	1.00	1.00	1.00	2.00
	Actual		2.73	1.01					4.03		1.10				2.87	0.98	0.00 <sup>b</sup>	1.07	1.92
62 of 94	Expected		1.00	2.00		3.00	4.00	1.00					1.00		1.00	1.00	1.00	1.00	1.00
	Actual		1.03	2.00		2.88	3.85	1.03					1.01		0.87	0.84	0.00 <sup>b</sup>	1.03	0.98
63 of 94	Expected	2.00	1.00	2.00		3.00	2.00	1.00		1.00	1.00		1.00		1.00	1.00			
	Actual	2.16	0.95	1.94		2.76	2.17	0.97		1.07	1.07		0.92		0.95	1.01			
64 of 94	Expected	4.00		1.00		3.00	2.00		1.00	1.00	1.00				2.00	2.00			
	Actual	4.07		1.04		2.81	2.03		1.04	1.03	1.00				1.80	1.94			
82 of 94	Expected	1.00		2.00	3.00	1.00	1.00	1.00	3.00		2.00		1.00		1.00				1.00
	Actual	1.05		2.03	0.00 <sup>a</sup>	0.92	1.02	0.99	2.87		2.04		1.01		0.81				1.01
83 of 94	Expected	1.00	1.00	4.00	2.00	1.00	1.00	1.00	2.00		1.00				1.00	1.00			1.00
	Actual	1.00	1.09	3.81	0.00 <sup>a</sup>	1.06	1.08	0.92	2.04		0.98				0.94	0.98			1.07
84 of 94	Expected		2.00	4.00	1.00	1.00	1.00	1.00	2.00						1.00	1.00			2.00
	Actual		2.04	4.17	0.00 <sup>a</sup>	0.95	1.05	1.02	1.83						0.85	1.01			2.07

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

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

Date: 29 JUL 2014

Signature: *Michael R. Gypke*

Title: Technical Manager, BEI Authentication or designee

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