

**Peptide Array, Influenza Virus  
A/New York/384/2005 (H3N2)  
Neuraminidase Protein**

**Catalog No. NR-2608**

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**Contributor:**

BEI Resources

**Manufacturer:**

American Peptide Company, Inc.

**Product Description:**

The 78-peptide array spans the neuraminidase (NA) protein of the A/New York/384/2005 (H3N2) strain of influenza virus (GenPept: AAZ79977).<sup>1</sup> Peptides are 14- to 17-mers, with 11 or 12 amino acid overlaps. Please see Table 1 for length and sequence of individual peptides.

**Material Provided:**

Peptides are provided lyophilized at 1 mg per vial.

**Packaging/Storage:**

Lyophilized peptides should be placed in a closed dry environment with desiccants and stored at -20°C or colder immediately upon arrival. A frost-free freezer should be avoided, since changes in moisture and temperature may affect peptide stability.

**Solubility:**

Solubility may vary based on the amino acid content of the individual peptide (see Table 2). Peptides can almost always be dissolved in 100% DMSO.

**Reconstitution:**

Lyophilized peptides should be warmed to room temperature for 1 hour prior to reconstitution. They should be dissolved at the highest possible concentration, and then diluted with water or buffer to the working concentration. Buffer should be added only after the peptide is completely in solution because salts may cause aggregation.

The most common dissolution process is 1 mg of peptide in 1 mL of sterile, distilled water or 1 mL of 100% DMSO. The DMSO can be slowly diluted to a lower concentration with aqueous medium. Care must be taken to ensure that the peptide does not begin to precipitate out of solution. For cell-based assays, 0.5% DMSO in medium is usually well-tolerated.

Sonication and/or the addition of small amounts of dilute (10%) aqueous acetic acid for basic peptides, aqueous

ammonia for acidic peptides or acetonitrile may also help dissolution (see Table 2). These solvents may not be appropriate for certain applications, including cell-based assays.

**Storage of Reconstituted Peptides:**

The shelf life of peptides in solution is very limited, especially for sequences containing cysteine, methionine, tryptophan, asparagine, glutamine, and N-terminal glutamic acid. In general, peptides may be aliquoted and stored in solution for a few days at -20°C or colder. For long-term storage, peptides should be re-lyophilized and stored at -20°C or colder. If long-term storage in solution is unavoidable, peptide solutions should be buffered to pH 5-6, aliquoted and stored at -20°C or colder. Freeze-thaw cycles should be avoided.

**Citation:**

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Peptide Array, Influenza Virus A/New York/384/2005 (H3N2) Neuraminidase Protein, NR-2608."

**Biosafety Level: 1**

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories. 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see [www.cdc.gov/biosafety/publications/bmbli5/index.htm](http://www.cdc.gov/biosafety/publications/bmbli5/index.htm).

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**References:**

1. Ghedin, E., et al. "The NIAID Influenza Genome Sequencing Project." Direct submission (2005). GenPept: AAZ79977.

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Table 1		
Peptide	Length	Sequence
1 of 78	17	1 MNPNQKIITIGSVSLTI 17
2 of 78	17	7 IITIGSVSLTISTICFF 23
3 of 78	17	13 VSLTISTICFFMQIAIL 29
4 of 78	17	19 TICFFMQIAILITVTL 35
5 of 78	17	24 MQIAILITVTLHFKQY 40
6 of 78	17	30 ITTVTLHFKQYEFNSPP 46
7 of 78	17	36 HFKQYEFNSPPNNQVML 52
8 of 78	17	42 FNSPPNNQVMLCEPTI 58
9 of 78	17	48 NQVMLCEPTIERNITE 64
10 of 78	17	54 EPTIERNITEIVYLTN 70
11 of 78	17	60 RNITEIVYLTNTTIEKE 76
12 of 78	17	66 VYLTNTTIEKEICPKLA 82
13 of 78	17	72 TIEKEICPKLAEYRNWS 88
14 of 78	17	78 CPKLAEYRNWSKPQCDI 94
15 of 78	17	84 YRNWSKPQCDITGFAPF 100
16 of 78	17	90 PQCDITGFAPFSKDNSI 106
17 of 78	17	96 GFAPFSKDNSIRLSAGG 112
18 of 78	17	102 KDNSIRLSAGGDIWVTR 118
19 of 78	16	108 LSAGGDIWVTREPYVS 123
20 of 78	16	113 DIWVTREPYVSCDPDK 128
21 of 78	17	118 REPYVSCDPDKCYQFAL 134
22 of 78	17	124 CDPDKCYQFALGQGTTL 140
23 of 78	17	130 YQFALGQGTTLNNVHSN 146
24 of 78	17	135 GQGTTLNNVHSNDTVHD 151
25 of 78	17	141 NNVHSNDTVHDRTPYRT 157
26 of 78	17	147 DTVHDRTPYRTLLMNEL 163
27 of 78	17	153 TPYRTLLMNELGVPFHL 169
28 of 78	16	159 LMNELGVPFHLGKQV 174
29 of 78	17	164 GVPFHLGKQVCIWSS 180
30 of 78	17	170 GTKQVCIWSSSSSCHDG 186

Table 1		
Peptide	Length	Sequence
31 of 78	17	176 IAWSSSSCHDGKAWLHV 192
32 of 78	17	182 SCHDGKAWLHVCVTGDD 198
33 of 78	17	188 AWLHVCVTGDDKNATAS 204
34 of 78	17	194 VTGDDKNATASFIYNGR 210
35 of 78	17	200 NATASFIYNGRLVDSIV 216
36 of 78	17	206 IYNGRLVDSIVSWSKEI 222
37 of 78	17	212 VDSIVSWSKEILRTQES 228
38 of 78	17	218 WSKEILRTQESECVCIN 234
39 of 78	17	224 RTQESECVCINGTCTVV 240
40 of 78	17	230 CVCINGTCTVVMTDGSA 246
41 of 78	17	236 TCTVVMTDGSASGKADT 252
42 of 78	17	242 TDGSASGKADTKILFIE 258
43 of 78	17	248 GKADTKILFIEEGKIVH 264
44 of 78	17	254 ILFIEEGKIVHTSTLSG 270
45 of 78	17	260 GKIVHTSTLSGSAQHVE 276
46 of 78	17	266 STLSGSAQHVEECSCYP 282
47 of 78	17	272 AQHVEECSCYPRYPGVR 288
48 of 78	17	278 CSCYPRYPGVRCVCRDN 294
49 of 78	17	284 YPGVRCVCRDNWKGSNR 300
50 of 78	17	290 VCRDNWKGSNRPIVDIN 306
51 of 78	17	296 KGSNRPIVDINIKDYSI 312
52 of 78	16	302 IVDINIKDYSIVSSYV 317
53 of 78	17	307 IKDYSIVSSYVCSGLVG 323
54 of 78	17	313 VSSYVCSGLVGDTPRKN 329
55 of 78	17	319 SGLVGDTPRKNDS SSSS 335
56 of 78	17	325 TPRKNDS SSSSHCLDPN 341
57 of 78	17	331 SSSSHCLDPNNEEGGH 347
58 of 78	17	337 CLDPNNEEGHGVKQWA 353
59 of 78	17	343 EEGHGVKQWAFDDGND 359
60 of 78	17	349 VKQWAFDDGNDVWMGRT 365
61 of 78	17	355 DDGNDVWMGRTISEKLR 371
62 of 78	17	361 WMGRTISEKLRSGYETF 377
63 of 78	17	367 SEKLRSGYETFVKVIEGW 383
64 of 78	17	373 GYETFVKVIEGWSNPNSK 389
65 of 78	17	379 VIEGWSNPNSKLQINRQ 395
66 of 78	17	385 NPNSKLQINRQVIVDRG 401
67 of 78	17	390 QINRQVIVDRGNRSGY 406
68 of 78	17	396 VIVDRGNRSGYSGIFSV 412
69 of 78	17	402 NRSGYSGIFSVGKSCI 418
70 of 78	17	408 GIFSVGKSCINRCFYV 424

Table 1		
Peptide	Length	Sequence
71 of 78	17	414 GKSCINRCFYVELIRGR 430
72 of 78	17	420 RCFYVELIRGRKEETEYV 436
73 of 78	17	426 LIRGRKEETEVLWTSNS 442
74 of 78	17	432 EETEVLWTSNSIVVFCG 448
75 of 78	17	438 WTSNSIVVFCGTSPTYG 454
76 of 78	17	444 VVFCGTSPTYGTGSWPD 460
77 of 78	17	450 SPTYGTGSWPDGADINL 466
78 of 78	14	456 GSWPDGADINLMPI 469

Table 2			
Peptide	Solubility	Solvent	Reconstitution pH, if required
1 of 78	1 mg/mL	20% acetonitrile in water	pH 6
2 of 78	1 mg/mL	50% formic acid and 50% acetonitrile	pH 1
3 of 78	1 mg/mL	Water	
4 of 78	1 mg/mL	50% formic acid and 50% acetonitrile	pH 1
5 of 78	1 mg/mL	40% acetonitrile in water	pH 6
6 of 78	1 mg/mL	10% acetonitrile in water	pH 6
7 of 78	1 mg/mL	20% acetonitrile in water	pH 6
8 of 78	1 mg/mL	10% acetonitrile in water	pH 6
9 of 78	1 mg/mL	5% ammonium hydroxide in water	pH 11
10 of 78	1 mg/mL	Water	
11 of 78	1 mg/mL	Water	
12 of 78	1 mg/mL	20% acetonitrile in water	pH 6
13 of 78	1 mg/mL	20% acetonitrile in water	pH 6
14 of 78	1 mg/mL	20% acetonitrile in water	pH 6
15 of 78	1 mg/mL	20% acetonitrile in water	pH 6
16 of 78	1 mg/mL	20% acetonitrile in water	pH 6
17 of 78	1 mg/mL	20% acetonitrile in water	pH 6
18 of 78	1 mg/mL	10% acetonitrile in water	pH 6
19 of 78	1 mg/mL	10% acetonitrile in water	pH 6
20 of 78	1 mg/mL	20% acetonitrile in water	pH 6
21 of 78	1 mg/mL	20% acetonitrile in water	pH 6
22 of 78	1 mg/mL	20% acetonitrile in water	pH 6
23 of 78	1 mg/mL	20% acetonitrile in water	pH 6
24 of 78	1 mg/mL	Water	
25 of 78	1 mg/mL	10% acetonitrile in water	pH 6
26 of 78	1 mg/mL	20% acetonitrile in water	pH 6
27 of 78	1 mg/mL	30% acetonitrile in water	pH 6
28 of 78	1 mg/mL	20% acetonitrile in water	pH 6

Table 2			
Peptide	Solubility	Solvent	Reconstitution pH, if required
29 of 78	1 mg/mL	20% acetonitrile in water	pH 6
30 of 78	1 mg/mL	10% acetonitrile in water	pH 6
31 of 78	1 mg/mL	20% acetonitrile in water	pH 6
32 of 78	1 mg/mL	10% acetonitrile in water	pH 6
33 of 78	1 mg/mL	20% acetonitrile in water	pH 6
34 of 78	1 mg/mL	10% acetonitrile in water	pH 6
35 of 78	1 mg/mL	Water	
36 of 78	1 mg/mL	20% acetonitrile in water	pH 6
37 of 78	1 mg/mL	20% acetonitrile in water	pH 6
38 of 78	1 mg/mL	50% formic acid and 50% acetonitrile	pH 1
39 of 78	1 mg/mL	Water	
40 of 78	1 mg/mL	50% formic acid and 50% acetonitrile	pH 1
41 of 78	1 mg/mL	10% acetonitrile in water	pH 6
42 of 78	1 mg/mL	10% acetonitrile in water	pH 6
43 of 78	1 mg/mL	20% acetonitrile in water	pH 6
44 of 78	1 mg/mL	5% ammonium hydroxide in water	pH 11
45 of 78	1 mg/mL	10% acetonitrile in water	pH 6
46 of 78	1 mg/mL	20% acetonitrile in water	pH 6
47 of 78	1 mg/mL	10% acetonitrile in water	pH 6
48 of 78	1 mg/mL	Water	
49 of 78	1 mg/mL	10% acetonitrile in water	pH 6
50 of 78	1 mg/mL	10% acetonitrile in water	pH 6
51 of 78	1 mg/mL	20% acetonitrile in water	pH 6
52 of 78	1 mg/mL	50% formic acid and 50% acetonitrile	pH 1
53 of 78	1 mg/mL	10% acetonitrile in water	pH 6
54 of 78	1 mg/mL	10% acetonitrile in water	pH 6
55 of 78	1 mg/mL	10% acetonitrile in water	pH 6
56 of 78	1 mg/mL	10% acetonitrile in water	pH 6
57 of 78	1 mg/mL	Water	
58 of 78	1 mg/mL	Water	
59 of 78	1 mg/mL	Water	
60 of 78	1 mg/mL	10% acetonitrile in water	pH 6
61 of 78	1 mg/mL	20% acetonitrile in water	pH 6
62 of 78	1 mg/mL	20% acetonitrile in water	pH 6
63 of 78	1 mg/mL	10% acetonitrile in water	pH 6
64 of 78	1 mg/mL	20% acetonitrile in water	pH 6
65 of 78	1 mg/mL	10% acetonitrile in water	pH 6
66 of 78	1 mg/mL	10% acetonitrile in water	pH 6
67 of 78	1 mg/mL	10% acetonitrile in water	pH 6
68 of 78	1 mg/mL	20% acetonitrile in water	pH 6
69 of 78	1 mg/mL	20% acetonitrile in water	pH 6
70 of 78	1 mg/mL	10% acetonitrile in water	pH 6

<b>Table 2</b>			
<b>Peptide</b>	<b>Solubility</b>	<b>Solvent</b>	<b>Reconstitution pH, if required</b>
71 of 78	1 mg/mL	20% acetonitrile in water	pH 6
72 of 78	1 mg/mL	10% acetonitrile in water	pH 6
73 of 78	1 mg/mL	10% acetonitrile in water	pH 6
74 of 78	1 mg/mL	5% ammonium hydroxide in water	pH 11
75 of 78	1 mg/mL	5% ammonium hydroxide in water	pH 11
76 of 78	1 mg/mL	20% acetonitrile in water	pH 6
77 of 78	1 mg/mL	20% acetonitrile in water	pH 6
78 of 78	1 mg/mL	30% acetonitrile in water	pH 6