

# Product Information Sheet for NR-2607

## Peptide Array, Influenza Virus A/Thailand/4(SP-528)/2004 (H5N1) Neuraminidase Protein

### Catalog No. NR-2607

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### For research use only. Not for human use.

#### Contributor:

BEI Resources

#### Manufacturer:

American Peptide Company Inc.

#### Product Description:

The 74-peptide array spans the neuraminidase protein of the A/Thailand/4(SP-528)/2004 (H5N1) strain of influenza virus (GenPept: AAS89006).<sup>1</sup> Peptides are 15- 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 dessicants 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/Thailand/4(SP-528)/2004 (H5N1) Neuraminidase Protein, NR-2607."

#### 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/bmbl5/index.htm](http://www.cdc.gov/biosafety/publications/bmbl5/index.htm).

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## References:

1. Puthavathana, P., et al. "Molecular Characterization of the Complete Genome of Human Influenza H5N1 Virus Isolates from Thailand." *J. Gen. Virol.* 86 (2005): 423–433. PubMed: 15659762. GenPept: AAS89006.

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Table 1		
Peptide	Length	Sequence
1 of 74	17	1 MNPNNKIITIGSICMVT 17
2 of 74	17	7 IITIGSICMVTGMVSLM 23
3 of 74	17	13 ICMVTGMVSLMLQIGNL 29
4 of 74	17	19 MVSLMLQIGNLISIWVS 35
5 of 74	17	24 LQIGNLISIWVSHSIHT 40
6 of 74	17	30 ISIWVSHSIHTGNQHKA 46
7 of 74	17	36 HSIHTGNQHKAEPISNT 52
8 of 74	17	42 NQHKAEPISNTNFLTKE 58
9 of 74	17	48 PISNTNFLTKEAVASVK 64
10 of 74	17	54 FLTEKAVASVKLAGNSS 70
11 of 74	17	60 VASVKLAGNSSLCPING 76
12 of 74	17	66 AGNSSLCPINGWAVYSK 82
13 of 74	17	72 CPINGWAVYSKDNSIRI 88
14 of 74	17	78 AVYSKDNSIRIGSKGDV 94
15 of 74	17	84 NSIRIGSKGDVVFVIREP 100
16 of 74	17	90 SKGDVVFVIREPFISCSH 106
17 of 74	17	96 VIREPFISCSHLECRTE 112
18 of 74	17	102 ISCSHLECRTEFFLTQGA 118
19 of 74	17	108 ECRTFFLTQGALLNDKH 124
20 of 74	17	114 LTQGALLNDKHSNGTVK 130
21 of 74	17	120 LNDKHSNGTVKDRSPHR 136
22 of 74	17	126 NGTVKDRSPHRTLMSCP 142
23 of 74	17	132 RSPHRTLMSCPVGEAPS 148
24 of 74	17	138 LMSCPVGEAPSPYNSRF 154
25 of 74	17	144 GEAPSPYNSRFESVAWS 160
26 of 74	17	150 YNSRFESVAWSASACHD 166
27 of 74	17	156 SVAWSASACHDGTSWLT 172
28 of 74	17	162 SACHDGTSWLTIGISGP 178
29 of 74	17	168 TSWLTIGISGPDNGAVA 184
30 of 74	17	174 GISGPDNGAVAVLKYNG 190

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Table 1		
Peptide	Length	Sequence
31 of 74	17	180 NGAVAVLKYNGLITDTI 196
32 of 74	17	186 LKYNGLITDTIKSWRNN 202
33 of 74	17	192 ITDTIKSWRNNILRTQE 208
34 of 74	17	198 SWRNNILRTQESECACV 214
35 of 74	17	204 LRTQESECACVNGSCFT 220
36 of 74	17	210 ECACVNGSCFTVMTDGP 226
37 of 74	17	216 GSCFTVMTDGPSNGQAS 232
38 of 74	17	222 MTDGPSNGQASHKIFKM 238
39 of 74	17	228 NGQASHKIFKMEKGKVV 244
40 of 74	17	234 KIFKMEKGKVVKSVELD 250
41 of 74	17	240 KGKVVKSVELDAPNYHY 256
42 of 74	17	246 SVELDAPNYHYEECSY 262
43 of 74	17	252 PNYHYEECSYCPDAGEI 268
44 of 74	17	258 ECSCYCPDAGEITCVCRD 274
45 of 74	17	264 DAGEITCVCRDNWHGSN 280
46 of 74	17	270 CVCRDNWHGSNRPWVSF 286
47 of 74	17	276 WHGSNRPWVSFNQNLEY 292
48 of 74	16	282 PWVSFNQNLEYQIGYI 297
49 of 74	17	287 NQNLEYQIGYICSGVFG 303
50 of 74	17	292 YQIGYICSGVFGDNPRP 308
51 of 74	17	298 CSGVFGDNPRPNDGTGS 314
52 of 74	17	304 DNPRPNDGTGSCGPVSS 320
53 of 74	17	310 DGTGSCGPVSSNGAYGV 326
54 of 74	17	316 GPVSSNGAYGVKGFSFK 332
55 of 74	17	322 GAYGVKGFSFKYGNVW 338
56 of 74	17	328 GFSFKYGNVWIGRTKS 344
57 of 74	17	334 GNGVWIGRTKSTNSRSG 350
58 of 74	17	340 GRTKSTNSRSGFEMIWD 356
59 of 74	17	346 NSRSGFEMIWDPNGWTE 362
60 of 74	17	352 EMIWDPNGWTE TDSSFS 368
61 of 74	17	358 NGWTE TDSSFSVKQDIV 374
62 of 74	17	364 DSSFSVKQDIVAITDWS 380
63 of 74	17	370 KQDIVAITDWSGYSGSF 386
64 of 74	17	376 ITDWSGYSGSFVQHPEL 392
65 of 74	17	382 YSGSFVQHPELTGLDCI 398
66 of 74	17	387 VQHPELTGLDCIRPCFW 403
67 of 74	17	393 TGLDCIRPCFWVELIRG 409
68 of 74	17	399 RPCFWVELIRGRPKEST 415
69 of 74	17	405 ELIRGRPKESTIWTSGS 421
70 of 74	17	411 PKESTIWTSGSSISFCG 427

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Table 1		
Peptide	Length	Sequence
71 of 74	17	417 WTSGSSISFCGVNSDTV 433
72 of 74	17	423 ISFCGVNSDTVGVSWPD 439
73 of 74	17	429 NSDTVGVSWPDGAELPF 445
74 of 74	15	435 WSWPDGAELPFTIDK 449

Table 2			
Peptide	Solubility	Solvent	Reconstitution pH, if required
1 of 74	1 mg/mL	Water	
2 of 74	1 mg/mL	50% formic acid and 50% acetonitrile	pH 1
3 of 74	1 mg/mL	50% formic acid and 50% acetonitrile	pH 1
4 of 74	1 mg/mL	50% formic acid and 50% acetonitrile	pH 1
5 of 74	1 mg/mL	20% acetonitrile and 5% ammonium hydroxide in water	pH 10
6 of 74	1 mg/mL	Water	
7 of 74	1 mg/mL	Water	
8 of 74	1 mg/mL	Water	
9 of 74	1 mg/mL	Water	
10 of 74	1 mg/mL	Water	
11 of 74	1 mg/mL	Water	
12 of 74	1 mg/mL	Water	
13 of 74	1 mg/mL	Water	
14 of 74	1 mg/mL	Water	
15 of 74	1 mg/mL	Water	
16 of 74	1 mg/mL	Water	
17 of 74	1 mg/mL	Water	
18 of 74	1 mg/mL	5% ammonium hydroxide in water	pH 11
19 of 74	1 mg/mL	Water	
20 of 74	1 mg/mL	Water	
21 of 74	1 mg/mL	Water	
22 of 74	1 mg/mL	Water	
23 of 74	1 mg/mL	Water	
24 of 74	1 mg/mL	Water	
25 of 74	1 mg/mL	Water	
26 of 74	1 mg/mL	5% ammonium hydroxide in water	pH 11
27 of 74	1 mg/mL	Water	
28 of 74	1 mg/mL	Water	
29 of 74	1 mg/mL	Water	
30 of 74	1 mg/mL	Water	

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Table 2

Peptide	Solubility	Solvent	Reconstitution pH, if required
31 of 74	1 mg/mL	Water	
32 of 74	1 mg/mL	Water	
33 of 74	1 mg/mL	Water	
34 of 74	1 mg/mL	Water	
35 of 74	1 mg/mL	5% ammonium hydroxide in water	pH 11
36 of 74	1 mg/mL	5% ammonium hydroxide in water	pH 11
37 of 74	1 mg/mL	Water	
38 of 74	1 mg/mL	Water	
39 of 74	1 mg/mL	Water	
40 of 74	1 mg/mL	Water	
41 of 74	1 mg/mL	Water	
42 of 74	1 mg/mL	5% ammonium hydroxide in water	pH 11
43 of 74	1 mg/mL	5% ammonium hydroxide in water	pH 11
44 of 74	1 mg/mL	Water	
45 of 74	1 mg/mL	5% ammonium hydroxide in water	pH 11
46 of 74	1 mg/mL	Water	
47 of 74	1 mg/mL	Water	
48 of 74	1 mg/mL	5% ammonium hydroxide in water	pH 11
49 of 74	1 mg/mL	5% ammonium hydroxide in water	pH 11
50 of 74	1 mg/mL	5% ammonium hydroxide in water	pH 11
51 of 74	1 mg/mL	Water	
52 of 74	1 mg/mL	Water	
53 of 74	1 mg/mL	Water	
54 of 74	1 mg/mL	Water	
55 of 74	1 mg/mL	Water	
56 of 74	1 mg/mL	Water	
57 of 74	1 mg/mL	Water	
58 of 74	1 mg/mL	Water	
59 of 74	1 mg/mL	5% ammonium hydroxide in water	pH 11
60 of 74	1 mg/mL	5% ammonium hydroxide in water	pH 11
61 of 74	1 mg/mL	5% ammonium hydroxide in water	pH 11
62 of 74	1 mg/mL	Water	
63 of 74	1 mg/mL	5% ammonium hydroxide in water	pH 11
64 of 74	1 mg/mL	Water	
65 of 74	1 mg/mL	Water	
66 of 74	1 mg/mL	Water	
67 of 74	1 mg/mL	20% acetonitrile in water	pH 6
68 of 74	1 mg/mL	Water	
69 of 74	1 mg/mL	Water	

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Table 2			
Peptide	Solubility	Solvent	Reconstitution pH, if required
70 of 74	1 mg/mL	Water	
71 of 74	1 mg/mL	5% ammonium hydroxide in water	pH 11
72 of 74	1 mg/mL	5% ammonium hydroxide in water	pH 11
73 of 74	1 mg/mL	5% ammonium hydroxide in water	pH 11
74 of 74	1 mg/mL	Water	