Product Information Sheet for NR-9472

Peptide Array, Influenza Virus A/Wisconsin/67e5/2005 (H3N2) Hemagglutinin Protein

Catalog No. NR-9472

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Contributor:
BEI Resources

Manufacturer:
New England Peptide, LLC

Product Description:
The 94-peptide array spans amino acids 17 to 566 of the hemagglutinin protein of the A/Wisconsin/67e5/2005 (H3N2) strain of influenza virus (GenPept: ABO37599). To avoid conversion of the N-terminal glutamine of the first peptide to a cyclic pyroglutamate in acid solution, an alanine has been added to the N-terminus. Peptides are 13- to 17-mers, with 7 to 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 -20ºC 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 -20ºC or colder. For long-term storage, peptides should be re-lyophilized and stored at -20ºC or colder. If long-term storage in solution is unavoidable, peptide solutions should be buffered to pH 5–6, aliquoted and stored at -20ºC 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/Wisconsin/67e5/2005 (H3N2) Hemagglutinin Protein, NR-9472."

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.

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Support Provided by NIAID

Table 1

Peptide	Length	Sequence
1 of 94	17	1 AQKLPGNDNSTATLCLG 17
2 of 94	17	7 NDNSTATLCLGHHAVPN 23
3 of 94	17	13 TLCLGHHAVPNGTIVKT 29
4 of 94	17	19 HAVPNGTIVKTITNDQI 35
5 of 94	17	25 TIVKTITNDQIEVTNAT 41
6 of 94	15	31 TNDQIEVTNATELVQ 45
7 of 94	17	35 IEVTNATELVQSSSTGG 51
8 of 94	17	41 TELVQSSSTGGICDSPH 57
9 of 94	17	47 SSTGGICDSPHQILDGE 63
10 of 94	17	53 CDSPHQILDGENCTLID 69
11 of 94	16	59 ILDGENCTLIDALLGD 74
12 of 94	17	64 NCTLIDALLGDPQCDGF 80
13 of 94	17	70 ALLGDPQCDGFQNKKWD 86
14 of 94	17	75 PQCDGFQNKKWDLFVER 91
15 of 94	16	80 FQNKKWDLFVERSKAY 95
16 of 94	17	85 WDLFVERSKAYSNCYPY 101
17 of 94	17	91 RSKAYSNCYPYDVPDYA 107
18 of 94	17	97 NCYPYDVPDYASLRSLV 113
19 of 94	17	103 VPDYASLRSLVASSGTL 119
20 of 94	16	109 LRSLVASSGTLEFNDE 124
21 of 94	17	114 ASSGTLEFNDESFNWTG 130
22 of 94	17	119 LEFNDESFNWTGVTQNG 135
23 of 94	17	125 SFNWTGVTQNGTSSACK 141
24 of 94	16	131 VTQNGTSSACKRRSNN 146
25 of 94	17	136 TSSACKRRSNNSFFSRL 152
26 of 94	17	142 RRSNNSFFSRLNWLTHL 158
27 of 94	17	148 FFSRLNWLTHLKFKYPA 164
28 of 94	16	154 WLTHLKFKYPALNVTM 169
29 of 94	17	159 KFKYPALNVTMPNNEKF 175
30 of 94	17	165 LNVTMPNNEKFDKLYIW 181
31 of 94	17	171 NNEKFDKLYIWGVHHPG 187
32 of 94	17	177 KLYIWGVHHPGTDNDQI 193
33 of 94	17	183 VHHPGTDNDQIFLHAQA 199
34 of 94	17	189 DNDQIFLHAQASGRITV 205
35 of 94	17	195 LHAQASGRITVSTKRSQ 211
36 of 94	17	201 GRITVSTKRSQQTVIPN 217

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Table 1		
Peptide	**Length**	**Sequence**
37 of 94	17	207 TKRSQQTVIPNIGSRPR 223
38 of 94	15	213 TVIPNIGSRPRIRNI 227
39 of 94	17	217 NIGSRPRIRNIPSRISI 233
40 of 94	17	223 RIRNIPSRISIYWTIVK 239
41 of 94	17	229 SRISIYWTIVKPGDILL 245
42 of 94	17	235 WTIVKPGDILLINSTGN 251
43 of 94	17	241 GDILLINSTGNLIAPRG 257
44 of 94	16	247 NSTGNLIAPRGYFKIR 262
45 of 94	17	252 LIAPRGYFKIRSGKSSI 268
46 of 94	16	258 YFKIRSGKSSIMRSDA 273
47 of 94	17	263 SGKSSIMRSDAPIGKCN 279
48 of 94	16	269 MRSDAPIGKCNSECIT 284
49 of 94	16	274 PIGKCNSECITPNGSI 289
50 of 94	17	279 NSECITPNGSIPNDKPF 295
51 of 94	17	285 PNGSIPNDKPFQNVNRI 301
52 of 94	15	291 NDKPFQNVNRITYGA 305
53 of 94	17	295 FQNVNRITYGACPRYVK 311
54 of 94	17	301 ITYGACPRYVKQNTLKL 317
55 of 94	17	307 PRYVKQNTLKLATGMRN 323
56 of 94	17	313 NTLKLATGMRNVPEKQT 329
57 of 94	17	319 TGMRNVPEKQTRGIFGA 335
58 of 94	17	325 PEKQTRGIFGAIAGFIE 341
59 of 94	17	331 GIFGAIAGFIENGWEGM 347
60 of 94	17	337 AGFIENGWEGMVDGWYG 353
61 of 94	16	343 GWEGMVDGWYGFRHQN 358
62 of 94	17	348 VDGWYGFRHQNSEGIGQ 364
63 of 94	16	354 FRHQNSEGIGQAADLK 369
64 of 94	17	359 SEGIGQAADLKSTQAAI 375
65 of 94	17	365 AADLKSTQAAINQINGK 381
66 of 94	17	371 TQAAINQINGKLNRLIG 387
67 of 94	17	376 NQINGKLNRLIGKTNEK 392
68 of 94	17	382 LNRLIGKTNEKFHQIEK 398
69 of 94	17	388 KTNEKFHQIEKEFSEVE 404
70 of 94	17	394 HQIEKEFSEVEGRIQDL 410
71 of 94	17	400 FSEVEGRIQDLEKYVED 416
72 of 94	17	406 RIQDLEKYVEDTKIDLW 422
73 of 94	17	412 KYVEDTKIDLWSYNAEL 428
74 of 94	17	418 KIDLWSYNAELLVALEN 434
75 of 94	17	424 YNAELLVALENQHTIDL 440
76 of 94	17	430 VALENQHTIDLTDSEMN 446
77 of 94	17	436 HTIDLTDSEMNKLFERT 452
78 of 94	17	442 DSEMNKLFERTKKQLRE 458
79 of 94	17	448 LFERTKKQLRENAEDMG 464
80 of 94	17	454 KQLRENAEDMGNGCFKI 470
81 of 94	17	460 AEDMGNGCFKIYHKCDN 476
82 of 94	17	466 GCFKIYHKCDNACIGSI 482

Table 1		
Peptide	**Length**	**Sequence**
83 of 94	17	472 HKCDNACIGSIRNGTYD 488
84 of 94	17	478 CIGSIRNGTYDHDVYRD 494
85 of 94	17	484 NGTYDHDVYRDEALNNR 500
86 of 94	17	490 DVYRDEALNNRFQIKGV 506
87 of 94	17	496 ALNNRFQIKGVELKSGY 512
88 of 94	17	501 FQIKGVELKSGYKDWIL 517
89 of 94	17	506 VELKSGYKDWILWISFA 522
90 of 94	17	512 YKDWILWISFAISCFLL 528
91 of 94	13	518 WISFAISCFLLCV 530
92 of 94	16	524 SCFLLCVALLGFIMWA 539
93 of 94	17	529 CVALLGFIMWACQKGNI 545
94 of 94	17	535 FIMWACQKGNIRCNICI 551

Table 2		
Peptide	**Solubility**	**Solvent**
1 of 94	1 mg/mL	50% acetonitrile in water
2 of 94	1 mg/mL	50% acetonitrile in water
3 of 94	1 mg/mL	50% acetonitrile in water
4 of 94	1 mg/mL	50% acetonitrile in water
5 of 94	1 mg/mL	DMSO
6 of 94	1 mg/mL	DMSO
7 of 94	1 mg/mL	DMSO
8 of 94	1 mg/mL	50% acetonitrile in water
9 of 94	1 mg/mL	50% acetonitrile in water
10 of 94	1 mg/mL	50% acetonitrile in water
11 of 94	1 mg/mL	50% acetonitrile in water
12 of 94	1 mg/mL	50% acetonitrile in water
13 of 94	1 mg/mL	50% acetonitrile in water
14 of 94	1 mg/mL	50% acetonitrile in water
15 of 94	1 mg/mL	50% acetonitrile in water
16 of 94	1 mg/mL	50% acetonitrile in water
17 of 94	1 mg/mL	50% acetonitrile in water
18 of 94	1 mg/mL	50% acetonitrile in water
19 of 94	1 mg/mL	50% acetonitrile in water
20 of 94	1 mg/mL	50% acetonitrile in water
21 of 94	1 mg/mL	50% acetonitrile in water
22 of 94	1 mg/mL	75% acetonitrile in water
23 of 94	1 mg/mL	50% acetonitrile in water
24 of 94	1 mg/mL	50% acetonitrile in water
25 of 94	1 mg/mL	50% acetonitrile in water
26 of 94	1 mg/mL	50% acetonitrile in water
27 of 94	1 mg/mL	50% acetonitrile in water
28 of 94	1 mg/mL	50% acetonitrile in water
29 of 94	1 mg/mL	50% acetonitrile in water
30 of 94	1 mg/mL	50% acetonitrile in water

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Table 2		
Peptide	**Solubility**	**Solvent**
31 of 94	1 mg/mL	50% acetonitrile in water
32 of 94	1 mg/mL	50% acetonitrile in water
33 of 94	1 mg/mL	50% acetonitrile in water
34 of 94	1 mg/mL	50% acetonitrile in water
35 of 94	1 mg/mL	50% acetonitrile in water
36 of 94	1 mg/mL	50% acetonitrile in water
37 of 94	1 mg/mL	50% acetonitrile in water
38 of 94	1 mg/mL	50% acetonitrile in water
39 of 94	1 mg/mL	50% acetonitrile in water
40 of 94	1 mg/mL	50% acetonitrile in water
41 of 94	1 mg/mL	50% acetonitrile in water
42 of 94	1 mg/mL	50% acetonitrile in water
43 of 94	1 mg/mL	DMSO
44 of 94	1 mg/mL	50% acetonitrile in water
45 of 94	1 mg/mL	50% acetonitrile in water
46 of 94	1 mg/mL	50% acetonitrile in water
47 of 94	1 mg/mL	50% acetonitrile in water
48 of 94	1 mg/mL	50% acetonitrile in water
49 of 94	1 mg/mL	50% acetonitrile in water
50 of 94	1 mg/mL	50% acetonitrile in water
51 of 94	1 mg/mL	50% acetonitrile in water
52 of 94	1 mg/mL	50% acetonitrile in water
53 of 94	1 mg/mL	50% acetonitrile in water
54 of 94	1 mg/mL	50% acetonitrile in water
55 of 94	1 mg/mL	50% acetonitrile in water
56 of 94	1 mg/mL	50% acetonitrile in water
57 of 94	1 mg/mL	50% acetonitrile in water
58 of 94	1 mg/mL	50% acetonitrile in water
59 of 94	1 mg/mL	50% acetonitrile in water
60 of 94	1 mg/mL	DMSO
61 of 94	1 mg/mL	50% acetonitrile in water
62 of 94	1 mg/mL	50% acetonitrile in water
63 of 94	1 mg/mL	50% acetonitrile in water
64 of 94	1 mg/mL	75% acetonitrile in water
65 of 94	1 mg/mL	50% acetonitrile in water
66 of 94	1 mg/mL	50% acetonitrile in water
67 of 94	1 mg/mL	50% acetonitrile in water
68 of 94	1 mg/mL	50% acetonitrile in water
69 of 94	1 mg/mL	50% acetonitrile in water
70 of 94	1 mg/mL	50% acetonitrile in water
71 of 94	1 mg/mL	50% acetonitrile in water
72 of 94	1 mg/mL	50% acetonitrile in water
73 of 94	1 mg/mL	DMSO
74 of 94	1 mg/mL	DMSO
75 of 94	1 mg/mL	50% acetonitrile in water

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Table 2		
Peptide	**Solubility**	**Solvent**
76 of 94	1 mg/mL	50% acetonitrile in water
77 of 94	1 mg/mL	50% acetonitrile in water
78 of 94	1 mg/mL	50% acetonitrile in water
79 of 94	1 mg/mL	50% acetonitrile in water
80 of 94	1 mg/mL	50% acetonitrile in water
81 of 94	1 mg/mL	50% acetonitrile in water
82 of 94	1 mg/mL	50% acetonitrile in water
83 of 94	1 mg/mL	50% acetonitrile in water
84 of 94	1 mg/mL	50% acetonitrile in water
85 of 94	1 mg/mL	50% acetonitrile in water
86 of 94	1 mg/mL	50% acetonitrile in water
87 of 94	1 mg/mL	50% acetonitrile in water
88 of 94	1 mg/mL	50% acetonitrile in water
89 of 94	1 mg/mL	DMSO
90 of 94	1 mg/mL	50% acetonitrile in water
91 of 94	1 mg/mL	50% acetonitrile in water
92 of 94	1 mg/mL	50% acetonitrile in water
93 of 94	1 mg/mL	50% acetonitrile in water
94 of 94	1 mg/mL	75% acetonitrile in water

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