Peptide Array, Influenza Virus A/New York/348/2003 (H1N1) Nucleocapsid Protein

Catalog No. NR-2611

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Contributor:
BEI Resources

Manufacturer:
Bio-Synthesis, Inc.

Product Description:
The 82-peptide array spans the nucleocapsid protein (NP) of the A/New York/348/2003 (H1N1) strain of influenza virus (GenPept: ABA12733).[1] Peptides are 13- 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 -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).

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. Peptides that are not soluble in water can almost always be dissolved in DMSO. Once a peptide is in solution, the DMSO can be slowly diluted 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/New York/348/2003 (H1N1) Nucleocapsid Protein, NR-2611."

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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References:

1. Ghedin, E., et al. "The NIAID Influenza Genome Sequencing Project." Direct submission (2005). GenPept: ABA12733.

Support Provided by NIAID

Table 1

Peptide	Length	Sequence
1 of 82	17	1 MASQGTKRSYEQMETDG 17
2 of 82	17	7 KRSYEQMETDGERQNAT 23
3 of 82	17	13 METDGERQNATEIRASV 29
4 of 82	17	19 RQNATEIRASVGRMIGG 35
5 of 82	17	25 IRASVGRMIGGIGRFYI 41
6 of 82	17	31 RMIGGIGRFYIQMCTEL 47
7 of 82	17	37 GRFYIQMCTELKLNDYE 53
8 of 82	17	43 MCTELKLNDYEGRLIQN 59
9 of 82	17	49 LNDYEGRLIQNSLTIER 65
10 of 82	17	55 RLIQNSLTIERMVLSAF 71
11 of 82	17	61 LTIERMVLSAFDERRNK 77
12 of 82	17	67 VLSAFDERRNKYLEEHP 83
13 of 82	17	73 ERRNKYLEEHPSAGKDP 89
14 of 82	17	79 LEEHPSAGKDPKKTGGP 95
15 of 82	17	85 AGKDPKKTGGPIYKRVD 101
16 of 82	17	91 KTGGPIYKRVDGKWVRE 107
17 of 82	17	97 YKRVDGKWVRELVLYDK 113
18 of 82	17	103 KWVRELVLYDKEEIRRI 119
19 of 82	17	109 VLYDKEEIRRIWRQANN 125
20 of 82	17	115 EIRRIWRQANNGDDATA 131
21 of 82	17	121 RQANNGDDATAGLTHIM 137
22 of 82	17	127 DDATAGLTHIMIWHSNL 143
23 of 82	17	133 LTHIMIWHSNLNDTTYQ 149
24 of 82	17	139 WHSNLNDTTYQRTRALV 155
25 of 82	17	145 DTTYQRTRALVRTGMDP 161
26 of 82	17	151 TRALVRTGMDPRMCSLM 167
27 of 82	17	157 TGMDPRMCSLMQGSTLP 173
28 of 82	17	163 MCSLMQGSTLPRRSGAA 179
29 of 82	17	169 GSTLPRRSGAAGAAVKG 185
30 of 82	17	175 RSGAAGAAVKGVGTMVL 191
31 of 82	17	181 AAVKGVGTMVLELIRMI 197
32 of 82	17	187 GTMVLELIRMIKRGIND 203
33 of 82	17	193 LIRMIKRGINDRNFWRG 209
34 of 82	17	199 RGINDRNFWRGENGRKT 215
35 of 82	17	205 NFWRGENGRKTRIAYER 221

Table 1		
Peptide	**Length**	**Sequence**
36 of 82	17	211 NGRKTRIAYERMCNILK 227
37 of 82	17	217 IAYERMCNILKGKFQTA 233
38 of 82	17	223 CNILKGKFQTAAQKAMM 239
39 of 82	17	229 KFQTAAQKAMMDQVRES 245
40 of 82	17	234 AQKAMMDQVRESRNPGN 250
41 of 82	17	240 DQVRESRNPGNAEIEDL 256
42 of 82	17	246 RNPGNAEIEDLTFLARS 262
43 of 82	17	252 EIEDLTFLARSALILRG 268
44 of 82	17	258 FLARSALILRGSVAHKS 274
45 of 82	17	264 LILRGSVAHKSCLPACV 280
46 of 82	17	270 VAHKSCLPACVYGPAVA 286
47 of 82	17	276 LPACVYGPAVASGYDFE 292
48 of 82	17	282 GPAVASGYDFEKEGYSL 298
49 of 82	17	288 GYDFEKEGYSLVGVDPF 304
50 of 82	17	294 EGYSLVGVDPFKLLQTS 310
51 of 82	17	300 GVDPFKLLQTSQVYSLI 316
52 of 82	17	306 LLQTSQVYSLIRPNENP 322
53 of 82	17	312 VYSLIRPNENPAHKSQL 328
54 of 82	17	318 PNENPAHKSQLVWMACN 334
55 of 82	17	324 HKSQLVWMACNSAAFED 340
56 of 82	17	330 WMACNSAAFEDLRVSSF 346
57 of 82	17	336 AAFEDLRVSSFIRGTRV 352
58 of 82	17	342 RVSSFIRGTRVLPRGKL 358
59 of 82	17	348 RGTRVLPRGKLSTRGVQ 364
60 of 82	17	354 PRGKLSTRGVQIASNEN 370
61 of 82	17	360 TRGVQIASNENMDAIVS 376
62 of 82	17	366 ASNENMDAIVSSTLELR 382
63 of 82	17	372 DAIVSSTLELRSRYWAI 388
64 of 82	17	378 TLELRSRYWAIRTRSGG 394
65 of 82	17	384 RYWAIRTRSGGNTNQQR 400
66 of 82	17	390 TRSGGNTNQQRASAGQI 406
67 of 82	17	396 TNQQRASAGQISTQPTF 412
68 of 82	17	402 SAGQISTQPTFSVQRNL 418
69 of 82	17	408 TQPTFSVQRNLPFDKTT 424
70 of 82	17	414 VQRNLPFDKTTIMAAFT 430
71 of 82	17	420 FDKTTIMAAFTGNTEGR 436
72 of 82	17	426 MAAFTGNTEGRTSDMRA 442
73 of 82	17	432 NTEGRTSDMRAEIIKMM 448
74 of 82	17	438 SDMRAEIIKMMESARPE 454
75 of 82	17	444 IIKMMESARPEEVSFQG 460
76 of 82	17	450 SARPEEVSFQGRGVFEL 466
77 of 82	17	456 VSFQGRGVFELSDERAT 472
78 of 82	17	462 GVFELSDERATNPIVPS 478
79 of 82	17	468 DERATNPIVPSFDMSNE 484
80 of 82	17	474 PIVPSFDMSNEGSYFFG 490
81 of 82	17	480 DMSNEGSYFFGDNAEEY 496
82 of 82	13	486 SYFFGDNAEEYDN 498

Table 2		
Peptide	**Solubility**	**Solvent**
1 of 82	1 mg/mL	70% acetonitrile in water
2 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
3 of 82	1 mg/mL	50% 6 M guanidine-HCl and 25% acetic acid in water
4 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
5 of 82	1 mg/mL	50% acetic acid in water
6 of 82	1 mg/mL	100% DMSO
7 of 82	1 mg/mL	100% DMSO
8 of 82	1 mg/mL	100% DMSO
9 of 82	1 mg/mL	100% DMSO
10 of 82	1 mg/mL	100% DMSO
11 of 82	1 mg/mL	100% DMSO
12 of 82	1 mg/mL	50% acetic acid in water
13 of 82	1 mg/mL	50% acetic acid in water
14 of 82	1 mg/mL	50% acetic acid in water
15 of 82	1 mg/mL	50% acetic acid in water
16 of 82	1 mg/mL	50% acetic acid in water
17 of 82	1 mg/mL	50% acetic acid in water
18 of 82	1 mg/mL	50% acetic acid in water
19 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
20 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
21 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
22 of 82	1 mg/mL	100% DMSO
23 of 82	1 mg/mL	100% DMSO
24 of 82	1 mg/mL	70% acetonitrile in water
25 of 82	1 mg/mL	100% DMSO
26 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
27 of 82	1 mg/mL	50% acetic acid in water
28 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
29 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
30 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
31 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
32 of 82	1 mg/mL	100% DMSO
33 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
34 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
35 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
36 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
37 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
38 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
39 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
40 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
41 of 82	1 mg/mL	50% acetic acid in water

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Table 2		
Peptide	**Solubility**	**Solvent**
42 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
43 of 82	1 mg/mL	100% DMSO
44 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
45 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
46 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
47 of 82	1 mg/mL	70% acetonitrile in water
48 of 82	1 mg/mL	70% acetonitrile in water
49 of 82	1 mg/mL	100% DMSO
50 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
51 of 82	1 mg/mL	100% DMSO
52 of 82	1 mg/mL	50% acetic acid in water
53 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
54 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
55 of 82	1 mg/mL	100% DMSO
56 of 82	1 mg/mL	100% DMSO
57 of 82	1 mg/mL	100% DMSO
58 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
59 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
60 of 82	1 mg/mL	100% DMSO
61 of 82	1 mg/mL	100% DMSO
62 of 82	1 mg/mL	100% DMSO
63 of 82	1 mg/mL	100% DMSO
64 of 82	1 mg/mL	100% DMSO
65 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
66 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
67 of 82	1 mg/mL	70% acetonitrile in water
68 of 82	1 mg/mL	50% acetic acid in water
69 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
70 of 82	1 mg/mL	100% DMSO
71 of 82	1 mg/mL	100% DMSO
72 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
73 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
74 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
75 of 82	1 mg/mL	100% DMSO
76 of 82	1 mg/mL	100% DMSO
77 of 82	1 mg/mL	100% DMSO
78 of 82	1 mg/mL	0.05% trifluoroacetic acid in water
79 of 82	1 mg/mL	50% acetic acid in water
80 of 82	1 mg/mL	100% DMSO
81 of 82	1 mg/mL	100% DMSO
82 of 82	1 mg/mL	100% DMSO