Peptide Array, Influenza Virus A/New York/348/2003 (H1N1) Matrix Protein 1

Catalog No. NR-2613

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Contributor:
BEI Resources

Manufacturer:
Bio-Synthesis, Inc.

Product Description:
The 41-peptide array spans the matrix protein 1 (M1) of the A/New York/348/2003 (H1N1) strain of influenza virus (GenPept: ABA12730).[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) Matrix Protein 1, NR-2613."

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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Product Information Sheet for NR-2613

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References:

1. Ghedin, E., et al. "The NIAID Influenza Genome Sequencing Project." Direct submission (2005). GenPept: ABA12730.

Support Provided by NIAID

Table 1

Peptide	Length	Sequence
1 of 41	17	1 MSLLTEVETYVLSIVPS 17
2 of 41	17	7 VETYVLSIVPSGPLKAE 23
3 of 41	17	13 SIVPSGPLKAEIAQRLE 29
4 of 41	17	19 PLKAEIAQRLEDVFAGK 35
5 of 41	17	25 AQRLEDVFAGKNTDLEA 41
6 of 41	17	31 VFAGKNTDLEALMEWLK 47
7 of 41	17	37 TDLEALMEWLKTRPILS 53
8 of 41	17	43 MEWLKTRPILSPLTKGI 59
9 of 41	17	49 RPILSPLTKGILGFVFT 65
10 of 41	17	55 LTKGILGFVFTLTVPSE 71
11 of 41	17	61 GFVFTLTVPSERGLQRR 77
12 of 41	17	67 TVPSERGLQRRRFVQNA 83
13 of 41	17	73 GLQRRRFVQNALNGNGD 89
14 of 41	17	79 FVQNALNGNGDPNNMDR 95
15 of 41	17	85 NGNGDPNNMDRAVKLYR 101
16 of 41	17	91 NNMDRAVKLYRKLKREI 107
17 of 41	17	97 VKLYRKLKREITFHGAK 113
18 of 41	17	103 LKREITFHGAKEIALSY 119
19 of 41	17	109 FHGAKEIALSYSAGALA 125
20 of 41	17	115 IALSYSAGALASCMGLI 131
21 of 41	17	121 AGALASCMGLIYNRMGA 137
22 of 41	17	127 CMGLIYNRMGAVTTESA 143
23 of 41	17	133 NRMGAVTTESAFGLICA 149
24 of 41	17	139 TTESAFGLICATCEQIA 155
25 of 41	17	145 GLICATCEQIADSQHKS 161
26 of 41	17	151 CEQIADSQHKSHRQMVT 167
27 of 41	17	157 SQHKSHRQMVTTTNPLI 173
28 of 41	17	163 RQMVTTTNPLIRHENRM 179
29 of 41	17	169 TNPLIRHENRMVLASTT 185
30 of 41	17	175 HENRMVLASTTAKAMEQ 191
31 of 41	17	181 LASTTAKAMEQMAGSSE 197
32 of 41	17	187 KAMEQMAGSSEQAAEAM 203
33 of 41	17	193 AGSSEQAAEAMEVASQA 209
34 of 41	17	199 AAEAMEVASQARQMVQA 215
35 of 41	17	205 VASQARQMVQAMRAIGT 221
36 of 41	17	210 RQMVQAMRAIGTHPSSS 226
37 of 41	17	216 MRAIGTHPSSSTGLKND 232

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Table 1		
Peptide	**Length**	**Sequence**
38 of 41	17	222 HPSSSTGLKNDLLENLQ 238
39 of 41	17	228 GLKNDLLENLQAYQKRM 244
40 of 41	17	234 LENLQAYQKRMGVQMQR 250
41 of 41	13	240 YQKRMGVQMQRFK 252

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

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