

Peptide Array, Influenza Virus A/New York/444/2001 (H1N1) Nonstructural Protein 1

Catalog No. NR-2612

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Contributor:

BEI Resources

Manufacturer:

Bio-Synthesis, Inc.

Product Description:

The 37-peptide array spans the nonstructural protein 1 (NS1) of the A/New York/444/2001 (H1N1) strain of influenza virus (GenPept: ABA42580).¹ 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).

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 -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/444/2001 (H1N1) Nonstructural Protein 1, NR-2612.”

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: ABA42580.

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Table 1		
Peptide	Length	Sequence
1 of 37	17	1 MDSHTVSSFQVDCFLWH 17
2 of 37	17	7 SSFQVDCFLWHVRKQVA 23
3 of 37	17	13 CFLWHVRKQVADQDLGD 29
4 of 37	17	19 RKQVADQDLGDAPFLDR 35
5 of 37	17	24 DQDLGDAPFLDRLRRDQ 40
6 of 37	17	30 APFLDRLRRDQKSLKGR 46
7 of 37	17	36 LRRDQKSLKGRGSTLGL 52
8 of 37	17	42 SLKGRGSTLGLNIETAT 58
9 of 37	17	48 STLGLNIETATCVGKQI 64
10 of 37	17	54 IETATCVGKQIVERILK 70
11 of 37	17	60 VGKQIVERILKEESDEA 76
12 of 37	17	66 ERILKEESDEAFKMTMA 82
13 of 37	17	72 ESDEAFKMTMASALASR 88
14 of 37	17	78 KMTMASALASRYLTDMT 94
15 of 37	17	84 ALASRYLTDMTIEEMSR 100
16 of 37	17	90 LTDMTIEEMSRDWFMLM 106
17 of 37	17	96 EEMSRDWFMLMPKQKVA 112
18 of 37	17	102 WFMLMPKQKVAGPLCVR 118
19 of 37	17	108 KQKVAGPLCVRMDQAIM 124
20 of 37	17	114 PLCVRMDQAIMDKNIIL 130
21 of 37	17	120 DQAIMDKNIILKANFSV 136
22 of 37	17	126 KNILKANFSVIFDRLE 142
23 of 37	17	132 ANFSVIFDRLETLTLR 148
24 of 37	17	138 FDRLETLTLRRAFTEEG 154
25 of 37	17	144 LTLRRAFTEEGAIVGEI 160
26 of 37	17	150 FTEEGAIVGEISPLPSL 166
27 of 37	17	156 IVGEISPLPSLPGHTNE 172
28 of 37	17	162 PLPSLPGHTNEDVKNAI 178
29 of 37	17	168 GHTNEDVKNAIGVLIGG 184
30 of 37	17	174 VKNAIGVLIGGLEWNDN 190
31 of 37	17	180 VLIGGLEWNDNTVRVSE 196
32 of 37	17	186 EWNDNTVRVSETLQRFA 202
33 of 37	17	192 VRVSETLQRFAWRSSNE 208
34 of 37	17	198 LQRFAWRSSNETGGPPF 214
35 of 37	17	204 RSSNETGGPPFTPTQKR 220
36 of 37	17	210 GGPPFTPTQKRKMAGTI 226
37 of 37	15	216 PTQKRKMAGTIRSEV 230

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