

Peptide Array, Influenza Virus A/New York/348/2003 (H1N1) Nonstructural Protein 2

Catalog No. NR-2615

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Contributor:

BEI Resources

Manufacturer:

Bio-Synthesis, Inc.

Product Description:

The 19-peptide array spans the nonstructural protein 2 (NS2) of the A/New York/348/2003 (H1N1) strain of influenza virus (GenPept: ABA12735).¹ Peptides are 13- to 17-mers, with 11 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/348/2003 (H1N1) Nonstructural Protein 2, NR-2615."

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-2615

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References:

1. Ghedin, E., et al. "The NIAID Influenza Genome Sequencing Project." Direct submission (2005). GenPept: ABA12735.

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Table 1		
Peptide	Length	Sequence
1 of 19	17	1 MDSHTVSSFQDILMRMS 17
2 of 19	17	7 SSFQDILMRMSKMLGS 23
3 of 19	17	13 LMRMSKMLGSSSGDLN 29
4 of 19	17	19 MQLGSSSGDLNGMITQF 35
5 of 19	17	25 SGDLNGMITQFESLKLY 41
6 of 19	17	31 MITQFESLKLYRDSLGE 47
7 of 19	17	37 SLKLYRDSLGEAVMRLG 53
8 of 19	17	43 DSLGEAVMRLGDLHSLQ 59
9 of 19	17	49 VMRLGDLHSLQHRNGKW 65
10 of 19	17	55 LHSLQHRNGKWREQLGQ 71
11 of 19	17	61 RNGKWREQLGQKFEEIR 77
12 of 19	17	67 EQLGQKFEEIRWLIEEV 83
13 of 19	17	73 FEEIRWLIEEVRHKLKT 89
14 of 19	17	79 LIEEVRHKLKTTENSFE 95
15 of 19	17	85 HKLKTENSFEQITFMQ 101
16 of 19	17	91 ENSFEQITFMQALQLLF 107
17 of 19	17	97 ITFMQALQLLFEVEQEI 113
18 of 19	17	103 LQLLFEVEQEIRTFSFQ 119
19 of 19	13	109 VEQEIRTFSFQLI 121

Table 2		
Peptide	Solubility	Solvent
1 of 19	1 mg/mL	25% acetonitrile and 10% acetic acid in water
2 of 19	1 mg/mL	100% DMSO
3 of 19	1 mg/mL	6 M guanidine-HCl
4 of 19	1 mg/mL	100% DMSO
5 of 19	1 mg/mL	100% DMSO
6 of 19	1 mg/mL	20% acetonitrile and 20% acetic acid in water
7 of 19	1 mg/mL	50% 6 M guanidine-HCl and 10% acetic acid in water
8 of 19	1 mg/mL	6 M guanidine-HCl
9 of 19	1 mg/mL	6 M guanidine-HCl
10 of 19	1 mg/mL	6 M guanidine-HCl
11 of 19	1 mg/mL	6 M guanidine-HCl
12 of 19	1 mg/mL	100% DMSO
13 of 19	1 mg/mL	25% acetonitrile and 20% acetic acid in water
14 of 19	1 mg/mL	100% DMSO
15 of 19	1 mg/mL	100% DMSO
16 of 19	1 mg/mL	100% DMSO
17 of 19	1 mg/mL	100% DMSO
18 of 19	1 mg/mL	100% DMSO
19 of 19	1 mg/mL	100% DMSO