

**Peptide Arrays, Influenza Virus  
A/New York/348/2003 (H1N1) and  
A/New York/504/1998 (H3N2) PB1-F2  
Proteins**

**Catalog No. NR-2865**

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**Contributor:**

BEI Resources

**Manufacturer:**

Bio-Synthesis, Inc.

**Product Description:**

NR-2865 contains two peptide arrays. The first peptide array (NRC-338; 8 peptides) spans the PB1-F2 protein of the A/New York/348/2003 (H1N1) strain of influenza virus (GenPept: ABA12738).<sup>1</sup> The second peptide array (NRC-339; 16 peptides) spans the PB1-F2 protein of the A/New York/504/1998 (H3N2) strain of influenza virus (GenPept: ABD15623).<sup>2</sup> 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 desiccants 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). 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 -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 Arrays, Influenza Virus A/New York/348/2003 (H1N1) and A/New York/504/1998 (H3N2) PB1-F2 Proteins, NR-2865.”

**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](http://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: ABA12738.
2. Ghedin, E., et al. "The NIAID Influenza Genome Sequencing Project." Direct submission (2006). GenPept: ABD15623.
3. Chanturiya, A. N., et al. "PB1-F2, an Influenza A Virus-Encoded Proapoptotic Mitochondrial Protein, Creates Variably Sized Pores in Planar Lipid Membranes." *J. Virol.* 78 (2004): 6304–6312. PubMed: 15163724.

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Table 1		
Peptide	Length	Sequence
<b>NRC-338: Influenza Virus A/New York/348/2003(H1N1)</b>		
1 of 8	17	1 MGQEQGTPWIQSTGHIS 17
2 of 8	17	7 TPWIQSTGHISTQKEED 23
3 of 8	17	13 TGHISTQKEEDGQKIPK 29
4 of 8	16	18 TQKEEDGQKIPKLEHR 33
5 of 8	17	23 DGQKIPKLEHRNSTQLM 39
6 of 8	17	29 KLEHRNSTQLMGHYQKT 45
7 of 8	17	35 STQLMGHYQKTMNQVAM 51
8 of 8	17	41 HYQKTMNQVAMPKQIVY 57
<b>NRC-339: Influenza Virus A/New York/504/1998(H3N2)</b>		
1 of 16	17	1 MEQEQGTPWTQSTEHTN 17
2 of 16	17	7 TPWTQSTEHTNIQRRGS 23
3 of 16	17	13 TEHTNIQRRGSGRQIQK 29
4 of 16	17	18 IQRRGSGRQIQKLGHPN 34
5 of 16	17	24 GRQIQKLGHPNSTQLMD 40
6 of 16	17	30 LGHPNSTQLMDHYLRIM 46
7 of 16	17	36 TQLMDHYLRIMSQVDMH 52
8 of 16	17	42 YLRIMSQVDMHKQTVSW 58
9 of 16	17	47 SQVDMHKQTVSWRLWPS 63
10 of 16	17	53 KQTVSWRLWPSLKNPTQ 69
11 of 16	17	59 RLWPSLKNPTQGSLRTH 75
12 of 16	17	65 KNPTQGSLRTHALKQWK 81
13 of 16	17	71 SLRTHALKQWKSFNKQG 87
14 of 16	17	77 LKQWKSFNKQGWNTLLK 93
15 of 16	17	83 FNKQGWNTLLKVARLMI 99
16 of 16	13	89 TLLKVARLMIGH 101

Table 2		
Peptide	Solubility	Solvent
<b>NRC-338: Influenza Virus A/New York/348/2003(H1N1)</b>		
1 of 8	1 mg/mL	50% acetic acid in water
2 of 8	1 mg/mL	50% acetic acid in water
3 of 8	1 mg/mL	50% acetic acid in water
4 of 8	1 mg/mL	50% acetic acid in water
5 of 8	1 mg/mL	50% acetic acid in water
6 of 8	1 mg/mL	50% acetic acid in water
7 of 8	1 mg/mL	50% acetic acid in water
8 of 8	1 mg/mL	50% acetic acid in water
<b>NRC-339: Influenza Virus A/New York/504/1998(H3N2)</b>		
1 of 16	1 mg/mL	50% acetic acid in water
2 of 16	1 mg/mL	50% acetic acid in water
3 of 16	1 mg/mL	50% acetic acid in water
4 of 16	1 mg/mL	50% acetic acid in water
5 of 16	1 mg/mL	50% acetic acid in water
6 of 16	1 mg/mL	50% acetic acid in water
7 of 16	1 mg/mL	50% acetic acid in water
8 of 16	1 mg/mL	50% acetic acid in water
9 of 16	1 mg/mL	50% acetic acid in water
10 of 16	1 mg/mL	50% acetic acid in water
11 of 16	1 mg/mL	50% acetic acid in water
12 of 16	1 mg/mL	50% acetic acid in water
13 of 16	1 mg/mL	50% acetic acid in water
14 of 16	1 mg/mL	50% acetic acid in water
15 of 16	1 mg/mL	50% acetic acid in water
16 of 16	1 mg/mL	50% acetic acid in water