

**Peptide Array, Influenza Virus A/Wyoming/03/2003 (H3N2) Neuraminidase Protein Diverse Peptides**

**Catalog No. NR-9477**

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**Contributor:**

BEI Resources

**Manufacturer:**

New England Peptide, LLC

**Product Description:**

NR-9477 contains 12 peptides that represent regions of amino acid sequence diversity in the neuraminidase (NA) protein of influenza virus A/Wyoming/03/2003 (H3N2) (GenPept: AAT08001) compared to the NA of influenza virus A/Wisconsin/67/2005 (H3N2) (GenPept: ABP52004). Peptides are 16- or 17-mers, with 11 or 13 amino acid overlaps. Please see Table 1 for length and sequence of individual peptides.

The NA of influenza virus A/Wyoming/03/2003 (H3N2) is identical to that of the NA of A/Wisconsin/67/2005 (H3N2) with the exception of 4 amino acids. A peptide array covering the entire NA protein of A/Wyoming/03/2003 (H3N2) can be constructed using these 12 peptides and peptides from A/Wisconsin/67/2005 (H3N2) (BEI Resources NR-9475).

**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/Wyoming/03/2003 (H3N2) Neuraminidase Protein Diverse Peptides, NR-9477.”

**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/bmb15/index.htm](http://www.cdc.gov/biosafety/publications/bmb15/index.htm).

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**References:**

1. Bragstad, K., et al. "New Avian Influenza A Virus Subtype Combination H5N7 Identified in Danish Mallard Ducks." *Virus Res.* 109 (2005): 181–190. PMID: 15763149.

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Peptide	Length	Sequence
34 of 82	17	186 GKAWLHVCVTGDDENAT 202
35 of 82	17	192 VCVTGDDENATASFIYN 208
36 of 82	16	198 DENATASFIYNGRLVD 213
38 of 82	17	208 NGRLVDSIVSWSKKILR 224
39 of 82	16	214 SIVSWSKKILRTQESE 229
40 of 82	17	219 SKKILRTQESECVCING 235
49 of 82	17	271 SAQHVEECSCYPRYPGV 287
50 of 82	16	275 VEECSCYPRYPGVRCV 290
51 of 82	17	280 CYPRYPGVRCVCRDNWK 296
75 of 82	17	416 SCINRCFYVELIRGRKQ 432
76 of 82	17	422 FYVELIRGRKQETEV LW 438
77 of 82	17	428 RGRKQETEV LWTSNSIV 444

Peptide	Solubility	Solvent
34 of 82	1 mg/mL	50% acetonitrile in water
35 of 82	1 mg/mL	50% acetonitrile in water
36 of 82	1 mg/mL	50% acetonitrile in water
38 of 82	1 mg/mL	50% acetonitrile in water
39 of 82	1 mg/mL	50% acetonitrile in water
40 of 82	1 mg/mL	75% acetonitrile in water
49 of 82	1 mg/mL	50% acetonitrile in water
50 of 82	1 mg/mL	50% acetonitrile in water
51 of 82	1 mg/mL	50% acetonitrile in water
75 of 82	1 mg/mL	50% acetonitrile in water
76 of 82	1 mg/mL	75% acetonitrile in water
77 of 82	1 mg/mL	50% acetonitrile in water