

## Peptide Array West Nile Virus Protein NS1

### Catalog No. NR-436

This reagent is the tangible property of the U.S. Government.

### For research use only. Not for human use.

#### Contributor:

BEI Resources

#### Product Description:

The 46-peptide array spans the NS1 protein of the NY99-flamingo382-99 strain of West Nile Virus (GenBank: AF196835).<sup>1</sup> Peptides are 15- to 19-mers, with 10 or 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 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 West Nile Virus Protein NS1, NR-436.”

#### 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).

#### Disclaimers:

You are authorized to use this product for research use only. It is not intended for human use.

Use of this product is subject to the terms and conditions of the BEI Resources Material Transfer Agreement (MTA). The MTA is available on our Web site at [www.beiresources.org](http://www.beiresources.org).

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet, neither ATCC® nor the U.S. Government makes any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither ATCC® nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC® and the U.S. Government are not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC®, their suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.

#### Use Restrictions:

**This material is distributed for internal research, non-commercial purposes only.** This material, its product or its derivatives may not be distributed to third parties. Except as performed under a U.S. Government contract, individuals contemplating commercial use of the material, its products or its derivatives must contact the contributor to negotiate a

license. U.S. Government contractors may need a license before first commercial sale.

**References:**

1. Lanciotti, R. S., et al. "Origin of the West Nile Virus Responsible for an Outbreak of Encephalitis in the Northeastern United States." Science 286 (1999): 2333–2337. PubMed: 10600742.

ATCC® is a trademark of the American Type Culture Collection.



Table 1		
Peptide	Length	Sequence
1	19	DTGCAIDISRQELRCGSGV
2	18	RQELRCGSGVFIHNDVEA
3	18	GVFIHNDVEAWMDRYKYY
4	18	EAWMDRYKYYPETPQGLA
5	18	YYPETPQGLAKIIQKAHK
6	17	LAKIIQKAHKKEGVCGLR
7	17	AHKEGVCGLRSVSRLEH
8	17	GLRSVSRLEHQMW EAVK
9	18	LEHQMW EAVKDELNTLLK
10	18	VKDELNTLLKENGVDLSV
11	18	LKENGVDLSVVVEKQEGM
12	18	SVVVEKQEGMYKSAPKRL
13	17	GMYSAPKRLTATTEKL
14	17	KRLTATTEKLEIGWKAW
15	17	EKLEIGWKAWGKSILFA
16	18	KAWGKSILFAPELANNTF
17	18	FAPELANNTFVVDGPETK
18	18	TFVVDGPETKECPTQNRA
19	16	TKECPTQNRAWSLEV
20	18	TQNRAWSLEVEDFGFGL
21	18	LEVEDFGFGLTSTRMFLK
22	18	GLTSTRMFLKVRESNTTE
23	16	LKVRESNTTECDISKII
24	18	NTTECDISKIIGTAVKNNL
25	18	IIGTAVKNNLAIHSDLSY
26	16	NLAIHSDLSYWIESRL
27	18	DLSYWIESRLNDTWKLER
28	17	RLNDTWKLERAVLGEVK
29	18	LERAVLGEVKSCTWPETH
30	18	VKSCTWPETHLWGDGIL
31	18	THTLWGDGILES DLIIPV
32	16	ILES DLIIPVTLAGPR
33	16	IIPVTLAGPRSNHNRR
34	18	AGPRSNHNRRPGYKTQNNQ
35	18	RRPGYKTQNNQGPWDEGRV
36	16	NQGPWDEGRVEIDFDY
37	18	EGRVEIDFDYCPGTTVTL
38	17	DYCPGTTVTLSESCGHR
39	15	VTLSESCGHRGPATR
40	18	SCGHRGPATRTTTESGKL
41	17	TRTTESGKLITDWCCR
42	18	GKLITDWCCR SCTLPLLR
43	18	CRSCTLPLLR YQTDSGCW
44	16	LR YQTDSGCWYGM EIR
45	17	SGCWYGM EIRPQRHDEK
46	19	EIRPQRHDEKTLVQSQVNA

Table 2		
Peptide	Solubility	Solvent
1	1 mg/mL	Water
2	1 mg/mL	Water
3	1 mg/mL	5% ammonium hydroxide in water
4	1 mg/mL	Water
5	1 mg/mL	Water
6	1 mg/mL	Water
7	1 mg/mL	Water
8	1 mg/mL	Water
9	1 mg/mL	Water
10	1 mg/mL	Water
11	1 mg/mL	Water
12	1 mg/mL	Water
13	1 mg/mL	Water
14	1 mg/mL	Water
15	1 mg/mL	Water
16	1 mg/mL	Water
17	1 mg/mL	Water
18	1 mg/mL	Water
19	1 mg/mL	Water
20	1 mg/mL	Water
21	1 mg/mL	Water
22	1 mg/mL	Water
23	1 mg/mL	Water
24	1 mg/mL	Water
25	1 mg/mL	Water
26	1 mg/mL	Water
27	1 mg/mL	Water
28	1 mg/mL	Water
29	1 mg/mL	Water
30	1 mg/mL	Water
31	1 mg/mL	Water
32	1 mg/mL	Water
33	1 mg/mL	Water
34	1 mg/mL	Water
35	1 mg/mL	Water
36	1 mg/mL	Water
37	1 mg/mL	Water
38	1 mg/mL	Water
39	1 mg/mL	Water
40	1 mg/mL	Water
41	1 mg/mL	Water
42	1 mg/mL	Water
43	1 mg/mL	Water
44	1 mg/mL	Water
45	1 mg/mL	Water
46	1 mg/mL	Water