Peptide Array West Nile Virus Protein NS4b

Catalog No. NR-441

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 33-peptide array spans the NS4b protein of the NY99-flamingo382-99 strain of West Nile Virus (GenBank: AF196835).[1] Peptides are 15- to 18-mers, with 10 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 -20ºC 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 -20ºC or colder. For long-term storage, peptides should be re-lyophilized and stored at -20ºC or colder. If long-term storage in solution is unavoidable, peptide solutions should be buffered to pH 5–6, aliquoted and stored at -20ºC 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 NS4b, NR-441."

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.

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.

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.

BEI Resources
www.beiresources.org

E-mail: contact@beiresources.org
Tel: 800-359-7370
Fax: 703-365-2898

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.

Support Provided by NIAID

Table 1

Peptide	Length	Sequence
1	17	NEMGWLDKTKSDISSLF
2	17	KTKSDISSLFGQRIEVK
3	18	SLFGQRIEVKENFSMGEF
4	17	VKENFSMGEFLLDLRPA
5	18	GEFLLDLRPATAWSLYAV
6	18	PATAWSLYAVTTAVLTPL
7	15	AVTTAVLTPLLKHLI
8	15	VLTPLLKHLITSDYI
9	17	LKHLITSDYINTSLTSI
10	18	DYINTSLTSINVQASALF
11	18	SINVQASALFTLARGFPF
12	18	LFTLARGFPFVDVGVSAL
13	17	PFVDVGVSALLLAAGCW
14	17	SALLLAAGCWGQVTLTV
15	18	GCWGQVTLTVTVTAATLL
16	18	TVTVTAATLLFCHYAYMV
17	18	LLFCHYAYMVPGWQAEAM
18	18	MVPGWQAEAMRSAQRRTA
19	18	AMRSAQRRTAAGIMKNAV
20	16	TAAGIMKNAVVDGIVA
21	18	KNAVVDGIVATDVPELER
22	18	VATDVPELERTTPIMQKK
23	18	ERTTPIMQKKVGQIMLIL
24	18	KKVGQIMLILVSLAAVVV
25	18	ILVSLAAVVVNPSVKTVR
26	18	VVNPSVKTVREAGILITA
27	16	VREAGILITAAAVTLW
28	18	LITAAAVTLWENGASSVW
29	18	LWENGASSVWNATTAIGL
30	18	VWNATTAIGLCHIMRGGW
31	18	GLCHIMRGGWLSCLSITW
32	18	GWLSCLSITWTLIKNMEK
33	15	TWTLIKNMEKPGLKR

BEI Resources
www.beiresources.org

E-mail: contact@beiresources.org
Tel: 800-359-7370
Fax: 703-365-2898

Table 2			
Peptide	**Solubility**	**Solvent**	**Reconstitution pH, if required**
1	0.5 mg/mL	Water	
2	0.5 mg/mL	Water	
3	0.5 mg/mL	Water	
4	0.5 mg/mL	Water	
5	0.5 mg/mL	Water	
6	0.5 mg/mL	30% acetonitrile in water	
7	0.5 mg/mL	Water	
8	0.5 mg/mL	Water	
9	0.5 mg/mL	Water	
10	0.5 mg/mL	30% acetonitrile in water	pH 8.0
11	0.5 mg/mL	Water	
12	0.5 mg/mL	60% acetonitrile in water	
13	0.5 mg/mL	50% acetonitrile in water	pH 8.0
14	0.5 mg/mL	Formic acid	
15	0.5 mg/mL	60% acetonitrile in water	
16	0.5 mg/mL	Water	
17	0.5 mg/mL	Water	
18	0.5 mg/mL	Water	
19	0.5 mg/mL	Water	
20	0.5 mg/mL	20% acetonitrile in water	
21	0.5 mg/mL	Water	
22	0.5 mg/mL	Water	
23	0.5 mg/mL	Water	
24	0.5 mg/mL	50% acetonitrile in water	
25	0.5 mg/mL	Water	
26	0.5 mg/mL	60% acetonitrile in water	
27	0.5 mg/mL	20% acetonitrile in water	
28	0.5 mg/mL	Formic acid	
29	0.5 mg/mL	30% acetonitrile in water	
30	0.5 mg/mL	40% acetonitrile in water	
31	0.5 mg/mL	20% acetonitrile in water	
32	0.5 mg/mL	Water	
33	0.5 mg/mL	Water	

BEI Resources
www.beiresources.org

E-mail: contact@beiresources.org
Tel: 800-359-7370
Fax: 703-365-2898