Peptide Array West Nile Virus Protein E

Catalog No. NR-435

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Contributor:

BEI Resources

Product Description:

The 67-peptide array spans the E protein of the NY99-flamingo382-99 strain of West Nile Virus (GenBank: AF196835).[1] 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 -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 E, NR-435."

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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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.

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Table 1		
Peptide	**Length**	**Sequence**
1	18	FNCLGMSNRDFLEGVSGA
2	17	RDFLEGVSGATWVDLVL
3	18	SGATWVDLVLEGDSCVTI
4	18	VLEGDSCVTIMSKDKPTI
5	17	TIMSKDKPTIDVKMMNM
6	18	PTIDVKMMNMEAANLAEV
7	17	NMEAANLAEVRSYCYLA
8	18	AEVRSYCYLATVSDLSTK
9	16	LATVSDLSTKAACPTM
10	18	LSTKAACPTMGEAHNDKR
11	18	TMGEAHNDKRADPAFVCR
12	18	KRADPAFVCRQGVVDRGW
13	17	CRQGVVDRGWGNGCGLF
14	15	RGWGNGCGLFGKGSI
15	17	GCGLFGKGSIDTCAKFA
16	18	GSIDTCAKFACSTKAIGR
17	18	FACSTKAIGRTILKENIK
18	18	GRTILKENIKYEVAIFVH
19	18	IKYEVAIFVHGPTTVESH
20	17	VHGPTTVESHGNYSTQV
21	18	ESHGNYSTQVGATQAGRF
22	17	TQVGATQAGRFSITPAA
23	17	AGRFSITPAAPSYTLKL
24	18	PAAPSYTLKLGEYGEVTV
25	18	KLGEYGEVTVDCEPRSGI
26	18	TVDCEPRSGIDTNAYYVM
27	18	GIDTNAYYVMTVGTKTFL
28	17	VMTVGTKTFLVHREWFM
29	16	TFLVHREWFMDLNLPW
30	18	EWFMDLNLPWSSAGSTVW
31	17	PWSSAGSTVWRNRETLM
32	17	TVWRNRETLMEFEEPHA
33	18	TLMEFEEPHATKQSVIAL
34	18	HATKQSVIALGSQEGALH
35	17	ALGSQEGALHQALAGAI
36	19	ALHQALAGAIPVEFSSNTV
37	18	IPVEFSSNTVKLTSGHLK
38	18	TVKLTSGHLKCRVKMEKL
39	17	LKCRVKMEKLQLKGTTY
40	18	EKLQLKGTTYGVCSKAFK
41	16	TYGVCSKAFKFLGTPA
42	18	KAFKFLGTPADTGHGTVV
43	15	PADTGHGTVVLELQY
44	18	HGTVVLELQYTGTDGPCK
45	18	LQYTGTDGPCKVPISSVA
46	18	PCKVPISSVASLNDLTPV
47	16	VASLNDLTPVGRLVTV
48	17	LTPVGRLVTVNPFVSVA
49	18	VTVNPFVSVATANAKVLI
50	16	VATANAKVLIELEPPF

Table 1 (continued)		
Peptide	**Length**	**Sequence**
51	17	KVLIELEPPFGDSYIVV
52	17	PPFGDSYIVVGRGEQQI
53	16	IVVGRGEQQINHHWHK
54	18	EQQINHHWHKSGSSIGKA
55	18	HKSGSSIGKAFTTTLKGA
56	16	KAFTTTLKGAQRLAAL
57	17	LKGAQRLAALGDTAWDF
58	17	AALGDTAWDFGSVGGVF
59	18	WDFGSVGGVFTSVGKAVH
60	18	VFTSVGKAVHQVFGGAFR
61	18	VHQVFGGAFRSLFGGMSW
62	18	FRSLFGGMSWITQGLLGA
63	17	SWITQGLLGALLLWMGI
64	18	LGALLLWMGINARDRSIA
65	16	GINARDRSIALTFLAV
66	17	RSIALTFLAVGGVLLFL
67	16	LAVGGVLLFLSVNVHA

Table 2			
Peptide	**Solubility**	**Solvent**	**Reconstitution pH, if required**
1	1 mg/mL	10% acetic acid in water	
2	1 mg/mL	Water	
3	1 mg/mL	5% ammonium hydroxide in water	
4	1 mg/mL	10% acetic acid in 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	

Table 2 (continued)			
Peptide	**Solubility**	**Solvent**	**Reconstitution pH, if required**
31	1 mg/mL	Water	
32	1 mg/mL	5% ammonium hydroxide in 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	
47	1 mg/mL	Water	
48	1 mg/mL	Water	
49	1 mg/mL	Water	
50	1 mg/mL	Water	
51	1 mg/mL	Water	
52	1 mg/mL	Water	
53	1 mg/mL	Water	
54	1 mg/mL	Water	
55	1 mg/mL	Water	
56	1 mg/mL	Water	
57	1 mg/mL	Water	
58	1 mg/mL	0.01% ammonium hydroxide in water	pH 8.0
59	1 mg/mL	Water	
60	1 mg/mL	Water	
61	1 mg/mL	Water	
62	1 mg/mL	Water	
63	1 mg/mL	Water	
64	1 mg/mL	Water	
65	1 mg/mL	Water	
66	1 mg/mL	Formic acid	
67	1 mg/mL	Water	

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