Peptide Array West Nile Virus Protein NS3

Catalog No. NR-439

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Contributor:
BEI Resources

Product Description:
The 84-peptide array spans the NS3 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 NS3, NR-439."

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.

Support Provided by NIAID

Table 1		
Peptide	**Length**	**Sequence**
1	15	GGVLWDTPSPKEYKK
2	18	DTPSPKEYKKGDTTTGVY
3	18	KKGDTTTGVYRIMTRGLL
4	17	VYRIMTRGLLGSYQAGA
5	18	GLLGSYQAGAGVMVEGVF
6	18	GAGVMVEGVFHTLWHTTK
7	15	VFHTLWHTTKGAALM
8	16	WHTTKGAALMSGEGRL
9	18	AALMSGEGRLDPYWGSVK
10	16	RLDPYWGSVKEDRLCY
11	18	GSVKEDRLCYGGPWKLQH
12	18	CYGGPWKLQHKWNGQDEV
13	16	LQHKWNGQDEVQMIVV
14	17	GQDEVQMIVVEPGKNVK
15	18	IVVEPGKNVKNVQTKPGV
16	18	VKNVQTKPGVFKTPEGEI
17	17	GVFKTPEGEIGAVTLDF
18	19	GEIGAVTLDFPTGTSGSPI
19	18	FPTGTSGSPIVDKNGDVI
20	18	PIVDKNGDVIGLYGNGVI
21	17	VIGLYGNGVIMPNGSYI
22	18	GVIMPNGSYISAIVQGER
23	17	YISAIVQGERMDEPIPA
24	18	GERMDEPIPAGFEPEMLR
25	17	PAGFEPEMLRKKQITVL
26	18	MLRKKQITVLDLHPGAGK
27	18	VLDLHPGAGKTRRILPQI
28	18	GKTRRILPQIIKEAINRR
29	18	PQIIKEAINRRLRTAVLA
30	17	NRRLRTAVLAPTRVVAA
31	17	VLAPTRVVAAEMAEALR
32	16	VAAEMAEALRGLPIRY
33	17	EALRGLPIRYQTSAVPR
34	18	IRYQTSAVPREHNGNEIV
35	18	PREHNGNEIVDVMCHATL
36	18	IVDVMCHATLTHRLMSPH
37	18	TLTHRLMSPHRVPNYNLF
38	17	PHRVPNYNLFVMDEAHF
39	18	NLFVMDEAHFTDPASIAA
40	18	HFTDPASIAARGYISTKV
41	18	AARGYISTKVELGEAAAI
42	18	KVELGEAAAIFMTATPPG

Table 1 (continued)		
Peptide	**Length**	**Sequence**
43	15	AIFMTATPPGTSDPF
44	17	ATPPGTSDPFPESNSPI
45	17	DPFPESNSPISDLQTEI
46	15	SPISDLQTEIPDRAW
47	17	LQTEIPDRAWNSGYEWI
48	18	RAWNSGYEWITEYTGKTV
49	18	WITEYTGKTVWFVPSVKM
50	18	TVWFVPSVKMGNEIALCL
51	18	KMGNEIALCLQRAGKKVV
52	17	CLQRAGKKVVQLNRKSY
53	18	KVVQLNRKSYETEYPKCK
54	18	SYETEYPKCKNDDWDFVI
55	17	CKNDDWDFVITTDISEM
56	18	FVITTDISEMGANFKASR
57	18	EMGANFKASRVIDSRKSV
58	15	SRVIDSRKSVKPTII
59	18	SRKSVKPTIITEGEGRVI
60	17	IITEGEGRVILGEPSAV
61	18	RVILGEPSAVTAASAAQR
62	16	AVTAASAAQRRGRIGR
63	15	AAQRRGRIGRNPSQV
64	16	GRIGRNPSQVGDEYCY
65	18	PSQVGDEYCYGGHTNEDD
66	16	CYGGHTNEDDSNFAHW
67	17	NEDDSNFAHWTEARIML
68	15	AHWTEARIMLDNINM
69	18	ARIMLDNINMPNGLIAQF
70	18	NMPNGLIAQFYQPEREKV
71	18	AQFYQPEREKVYTMDGEY
72	18	EKVYTMDGEYRLRGEERK
73	17	EYRLRGEERKNFLELLR
74	18	ERKNFLELLRTADLPVWL
75	17	LRTADLPVWLAYKVAAA
76	18	VWLAYKVAAAGVSYHDRR
77	17	AAGVSYHDRRWCFDGPR
78	15	DRRWCFDGPRTNTIL
79	18	FDGPRTNTILEDNNEVEV
80	18	ILEDNNEVEVITKLGERK
81	17	EVITKLGERKILRPRWI
82	18	ERKILRPRWIDARVYSDH
83	17	WIDARVYSDHQALKAFK
84	17	SDHQALKAFKDFASGKR

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Table 2		
Peptide	**Solubility**	**Solvent**
1	1 mg/mL	Water
2	1 mg/mL	Water
3	1 mg/mL	Water
4	1 mg/mL	Water
5	1 mg/mL	50% formic acid in 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

Table 2 (continued)		
Peptide	**Solubility**	**Solvent**
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	Water
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	Water
67	1 mg/mL	Water
68	1 mg/mL	Water
69	1 mg/mL	Water
70	1 mg/mL	Water
71	1 mg/mL	Water
72	1 mg/mL	Water
73	1 mg/mL	Water
74	1 mg/mL	Water
75	1 mg/mL	Water
76	1 mg/mL	Water
77	1 mg/mL	Water
78	1 mg/mL	Water
79	1 mg/mL	20% acetonitrile in water
80	1 mg/mL	Water
81	1 mg/mL	Water
82	1 mg/mL	Water
83	1 mg/mL	Water
84	1 mg/mL	Water

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