

## Peptide Array West Nile Virus Protein NS5

### Catalog No. NR-442

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 122-peptide array spans the NS5 protein of the NY99-flamingo382-99 strain of West Nile Virus (GenBank: AF196835).<sup>1</sup> Peptides are 15- to 20-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 desiccants 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 NS5, NR-442.”

#### 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](http://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](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	16	GGAKGRTLGEVWKERL
2	18	TLGEVWKERLNQMTKEEF
3	18	RLNQMTKEEFTRYRKEAI
4	18	EFTRYRKEAIIEVDRSAA
5	15	AIIEVDRSAAKHARK
6	18	DRSAAKHARKEGNVTGGH
7	18	RKEGNVTGGHPVSRGTAK
8	18	GHPVSRGTAKLRWLVERR
9	18	AKLRWLVERRFLEPVGKV
10	17	RFLEPVGKVIDLGCGR
11	18	GKVIDLGCGRGGWCYMA
12	18	GRGGWCYMATQKRVQEV
13	15	MATQKRVQEVRYGTYK
14	15	RVQEVRYGTYKGGPGH
15	16	RGYTKGGPGHEEPQLV
16	18	GPGHEEPQLVQSYGWNIV
17	18	LVQSYGWNIVTMKSGVDV
18	18	IVTMKSGVDVFYRPSECC
19	17	DVFYRPSECCDTLLCDI
20	17	ECCDTLLCDIGESSSSA
21	18	CDIGESSSSAEVEEHRTI
22	16	SAEVEEHRTIRVLEMV
23	16	HRTIRVLEMVEDWLHR
24	18	LEMVEDWLHRGPREFCVK
25	18	HRGPREFCVKVLCPYMPK
26	18	VKVLCPYMPKVIKEMELL
27	18	PKVIKEMELLQRRYGGGL
28	17	LLQRRYGGGLVRNPLSR
29	18	GGLVRNPLSRNSTHEMYW
30	18	SRNSTHEMYWVSRASGNV
31	16	YWVSRASGNVVHVSVM
32	18	SGNVVHVSVMNMQVLLGR
33	17	NMQVLLGRMEKRTWK
34	18	LGRMEKRTWKGPQYEDV
35	18	WKGPQYEDVNLGSGTRA
36	16	DVNLGSGTRAVGKPLL
37	18	GTRAVGKPLLNSDTSKIK
38	18	LLNSDTSKIKNRIERLRR
39	18	IKNRIERLRREYSSTWHH
40	17	RREYSSTWHHDENHPYR
41	18	WHHDENHPYRTWNYHGSY
42	18	YRTWNYHGSYDVKPTGSA
43	18	SYDVKPTGSASSLVNGVV
44	17	SASSLVNGVVRLLSKPW
45	16	GVVRLLSKPWDTITNV

Table 1 (continued)		
Peptide	Length	Sequence
46	15	SKPWDTITNVTTMAM
47	16	TITNVTTMAMDTTPF
48	17	TMAMDTTPFGQQRVFK
49	17	TPFGQQRVFKKVDTKA
50	18	VFKEKVDTKAPEPPEGVK
51	19	KAPEPPEGVKYVLNETTNW
52	17	KYVLNETTNWLWAFAR
53	16	TNWLWAFAREKRPRM
54	18	FLAREKRPRMCSREEFIR
55	18	RMCSREEFIRKVNNAAL
56	20	IRKVNNAALGAMFEEQNQW
57	17	GAMFEEQNQWRSAREAV
58	18	NQWRSAREAVEDPKFWEM
59	18	AVEDPKFWEMVDEEREAH
60	16	EMVDEEREAHLRGECH
61	17	REHLRGECHTCIYNMM
62	16	ECHTCIYNMMGKREKK
63	18	YNMMGKREKKPGEFGKAK
64	18	KKPGEFGKAKGSRAIWF
65	17	AKGSRAIWFMWLGARFL
66	18	WFMWLGARFLEFEALGFL
67	18	FLEFEALGFLNEDHWLGR
68	17	FLNEDHWLGRKNSGGGV
69	18	LGRKNSGGGVEGLGLQKL
70	17	GVEGLGLQKLGYLREV
71	18	LQKLGYLREVGTRPGGK
72	17	REVGTRPGGKIYADDTA
73	18	GGKIYADDTAGWDTRITR
74	18	TAGWDTRITRADLENEAK
75	15	TRADLENEAKVLELL
76	18	ENEAKVLELLDGEHRRLA
77	18	LLDGEHRRLARAIIELTY
78	18	LARAIIELTYRHKVVKVM
79	17	TYRHKVVKVMRPAADGR
80	18	KVMRPAADGRTVMDVISR
81	19	GRTVMDVISREDQRGSGQV
82	18	REDQRGSGQVVITYALNTF
83	18	GQVVITYALNTFTNLAVQL
84	19	NTFTNLAVQLVRMMEGEGV
85	18	LVRMMEGEGVIGPDDVEK
86	18	GVIGPDDVEKLTGKGGPK
87	16	EKLTGKGGPKVVRTWLF
88	17	KGPKVVRTWLFENGEERL
89	15	WLFENGEERLSRMAV
90	18	GEERLSRMAVSGDDCVVK

Table 1 (continued)		
Peptide	Length	Sequence
91	17	AVSGDDCVVKPLDDRFA
92	18	VVKPLDDR FATSLHFLNA
93	18	FATSLHFLNAMSKVRKDI
94	19	NAMSKVRKDIQEWKPSTGW
95	18	IQEWKPSTGWYDWQQVPF
96	18	GWYDWQQVPFCSNHFTL
97	18	PFCSNHFTLIMKDGRTL
98	15	ELIMKDGRTL VVPCR
99	18	DGRTL VVPCR GQDELVGR
100	17	CRGQDELVGRARISPGA
101	18	VGRARISPGAGWNVRDTA
102	17	GAGWNVRDTACLAKSYA
103	18	DTACLAKSYAQMWLLLYF
104	18	YAQMWLLLYFHRRDLRLM
105	18	YFHRRDLRLMANAICSAV
106	15	LMANAICSAVPVNWV
107	17	ICSAVPVNWVPTGRTTW
108	18	NWVPTGRTTWSIHAGGEW
109	17	TWSIHAGGEWMTTEDML
110	18	GEWMTTEDMLEVWNRVWI
111	16	MLEVWNRVWIEENEWM
112	18	RVWIEENEWMEDKTPVEK
113	16	WMEDKTPVEK WSDVPY
114	18	PVEK WSDVPYSGKREDIW
115	18	PYSGKREDIWCGSLIGTR
116	16	IWCGSLIGTRARATWA
117	17	IGTRARATWAENIQVAI
118	17	TWAENIQVAINQVRAII
119	18	VAINQVRAIIGDEKYVDY
120	17	IIGDEKYVDYMSSLKRY
121	16	VDYMSSLKRYEDTTLV
122	15	LKRYEDTTLVEDTVL

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	20% acetonitrile in water	pH 8.0
5	0.5 mg/mL	Water	
6	0.5 mg/mL	Water	
7	0.5 mg/mL	Water	
8	0.5 mg/mL	Water	
9	0.5 mg/mL	Water	
10	0.5 mg/mL	Water	
11	0.5 mg/mL	Water	
12	0.5 mg/mL	Water	
13	0.5 mg/mL	Water	
14	0.5 mg/mL	Water	
15	0.5 mg/mL	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	pH 8.0
20	0.5 mg/mL	Water	pH 8.0
21	0.5 mg/mL	Water	
22	0.5 mg/mL	Water	
23	0.5 mg/mL	Water	
24	0.5 mg/mL	Water	
25	0.5 mg/mL	Water	
26	0.5 mg/mL	Water	
27	0.5 mg/mL	Water	
28	0.5 mg/mL	Water	
29	0.5 mg/mL	Water	
30	0.5 mg/mL	Water	
31	0.5 mg/mL	Water	
32	0.5 mg/mL	Water	
33	0.5 mg/mL	Water	
34	0.5 mg/mL	Water	
35	0.5 mg/mL	Water	
36	0.5 mg/mL	Water	
37	0.5 mg/mL	Water	
38	0.5 mg/mL	Water	
39	0.5 mg/mL	Water	
40	0.5 mg/mL	Water	
41	0.5 mg/mL	Water	
42	0.5 mg/mL	Water	
43	0.5 mg/mL	Water	
44	0.5 mg/mL	20% acetonitrile in water	
45	0.5 mg/mL	Water	

Table 2 (continued)			
Peptide	Solubility	Solvent	Reconstitution pH, if required
46	0.5 mg/mL	Water	
47	0.5 mg/mL	Water	pH 8.0
48	0.5 mg/mL	Water	
49	0.5 mg/mL	Water	
50	0.5 mg/mL	Water	
51	0.5 mg/mL	Water	
52	0.5 mg/mL	Water	
53	0.5 mg/mL	Water	
54	0.5 mg/mL	Water	
55	0.5 mg/mL	Water	
56	0.5 mg/mL	Water	
57	0.5 mg/mL	Water	
58	0.5 mg/mL	Water	
59	0.5 mg/mL	Water	
60	0.5 mg/mL	Water	
61	0.5 mg/mL	Water	
62	0.5 mg/mL	Water	
63	0.5 mg/mL	Water	
64	0.5 mg/mL	Water	
65	0.5 mg/mL	Water	
66	0.5 mg/mL	Formic acid	
67	0.5 mg/mL	Water	pH 8.0
68	0.5 mg/mL	Water	
69	0.5 mg/mL	Water	
70	0.5 mg/mL	Water	
71	0.5 mg/mL	Water	
72	0.5 mg/mL	Water	
73	0.5 mg/mL	Water	
74	0.5 mg/mL	Water	
75	0.5 mg/mL	Water	
76	0.5 mg/mL	Water	
77	0.5 mg/mL	Water	
78	0.5 mg/mL	Water	
79	1 mg/mL	Water	
80	0.5 mg/mL	Water	
81	0.5 mg/mL	Water	
82	0.5 mg/mL	40% acetonitrile in water	
83	0.5 mg/mL	40% acetonitrile in water	
84	0.5 mg/mL	Water	pH 8.0
85	0.5 mg/mL	Water	
86	0.5 mg/mL	Water	
87	0.5 mg/mL	Water	
88	0.5 mg/mL	Water	
89	0.5 mg/mL	Water	
90	0.5 mg/mL	Water	

Table 2 (continued)			
Peptide	Solubility	Solvent	Reconstitution pH, if required
91	0.5 mg/mL	Water	
92	0.5 mg/mL	Water	
93	0.5 mg/mL	Water	
94	0.5 mg/mL	Water	
95	0.5 mg/mL	Water	
96	0.5 mg/mL	Water	
97	0.5 mg/mL	Water	
98	0.5 mg/mL	Water	
99	0.5 mg/mL	Water	
100	0.5 mg/mL	Water	
101	0.5 mg/mL	Water	
102	0.5 mg/mL	Water	
103	0.5 mg/mL	Formic acid	
104	0.5 mg/mL	20% acetonitrile in water	
105	0.5 mg/mL	Water	pH 8.0
106	0.5 mg/mL	20% acetonitrile in water	
107	0.5 mg/mL	Water	
108	0.5 mg/mL	Water	
109	0.5 mg/mL	Water	pH 8.0
110	0.5 mg/mL	Water	
111	0.5 mg/mL	Water	
112	0.5 mg/mL	Water	
113	0.5 mg/mL	Water	
114	0.5 mg/mL	Water	
115	0.5 mg/mL	Water	
116	0.5 mg/mL	Water	
117	0.5 mg/mL	Water	pH 2.0
118	0.5 mg/mL	Water	pH 8.0
119	0.5 mg/mL	Water	
120	0.5 mg/mL	Water	
121	0.5 mg/mL	Water	
122	0.5 mg/mL	Water	