

### Peptide Array, Dengue Virus Type 2, New Guinea C (NGC), NS3 Protein

#### Catalog No. NR-509

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#### Contributor:

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#### Product Description:

The 83-peptide array spans the NS3 protein of Dengue virus type 2, New Guinea C (GenPept: AAA42941).<sup>1</sup> Peptides are 13- to 19-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 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 the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: Peptide Array Dengue, Virus Type 2, New Guinea C (NGC), NS3 Protein, NR-509.”

#### 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, 2007; see [www.cdc.gov/od/ohs/biosfty/bmb15/bmb15toc.htm](http://www.cdc.gov/od/ohs/biosfty/bmb15/bmb15toc.htm).

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### References:

1. Irie, K., et al. "Sequence Analysis of Cloned Dengue Virus Type 2 Genome (New Guinea-C Strain)." *Gene* 75 (1989): 197–211. PubMed: 2714651.
2. Putnak, J. R., et al. "Functional and Antigenic Domains of the Dengue-2 Virus Nonstructural Glycoprotein NS-1." *Virology* 163 (1988): 93–103. PubMed: 2964755.

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Table 1		
Peptide	Length	Sequence
1	18	AGVLWDVPSPPPVGKAEI
2	18	SPPPVGKAELEDGAYRIK
3	17	ELEDGAYRIKQKQKILGY
4	18	RIKQKQKILGYSIQAGVY
5	18	GYSIQAGVYKEGTFHTM
6	18	VYKEGTFHTMWHVTRGAV
7	18	TMWHVTRGAVLMHKGKRI
8	18	AVLMHKGKRIEPSWADVK
9	16	RIEPSWADVKKDLISY
10	16	ADVKKDLISYGGGWKL
11	15	LISYGGGWKLEGEWK
12	18	GGWKLEGEWKEGEEVQVL
13	16	WKEGEEVQVLALEPGK
14	18	VQVLALEPGKNPRAVQTK
15	18	GKNPRAVQTKPGLFKNAT
16	18	TKPGLFKNATGAVSL
17	18	NAGTIGAVSLDFSPGTS
18	17	SLDFSPGTSGPSIIDKK
19	17	TSGPSIIDKKGKVVGLY
20	17	DKKGVVGLYGNVVTTR
21	18	GLYGNVVTTRSGAYVSAI
22	17	TRSGAYVSAIAQTEKSI
23	16	SAIAQTEKSIEDNPEI
24	18	EKSIEDNPEIEDDIFRKR
25	18	EIEDDIFRKRKLTIMDLH
26	18	KRKLTIMDLHPGAGKTKR
27	17	LHPGAGKTKRYLPAIVR
28	18	TKRYLPAIVREAIKRLR
29	18	VREAIKRLRTLILAPTR
30	16	LRTLILAPTRVVAEM
31	17	APTRVVAEMEEALRGL
32	18	AEMEEALRGLPIRYQTPA
33	18	GLPIRYQTPAIRAHTGR
34	18	PAIRAHTGREIVDLMCH
35	18	GREIVDLMCHATFTMRL
36	18	CHATFTMRLSPVRVPNY
37	18	LLSPVRVPNYNLIIMDEA
38	18	NYNLIIMDEAHFTDPASI
39	16	EAHFTDPASIAARGYI
40	16	PASIAARGYISTRVEM
41	18	RGYISTRVEMGEAAGIFM
42	18	EMGEAAGIFMTATPPGSR

Table 1 (continued)		
Peptide	Length	Sequence
43	18	FMTATPPGSRDPFPQSNA
44	17	SRDPFPQSNAPIMDEER
45	17	SNAPIMDEEREIPERSW
46	17	EEREIPERSWSSGHEWV
47	18	RSWSSGHEWVTFDKGKTV
48	18	WVTFDKGKTVWFVPSIKA
49	18	TVWFVPSIKAGNDIAACL
50	18	KAGNDIAACLKNGKVKI
51	17	CLRKNGKVKIQLSRKTF
52	18	KVIQLSRKTFDSEYVKTR
53	18	TFDSEYVKTRTNDWDFVV
54	17	TRTNDWDFVTTDISEM
55	18	FVTTDISEMGANFKAER
56	18	EMGANFKAERVIDPRRCM
57	15	ERVIDPRRCMKPVIL
58	18	PRRCMKPVILTDGEERVI
59	17	ILTDGEERVILAGMPV
60	18	RVILAGMPVTHSSAAQR
61	16	PVTHSSAAQRRGRIGR
62	19	AAQRRGRIGRNPKNENDQY
63	17	RNPKNENDQYIYMGEPL
64	18	DQYIYMGEPLENDECAH
65	18	PLENDECAHWKEAKMLL
66	19	AHWKEAKMLLDNINTPEGI
67	15	LDNINTPEGIIPSMF
68	17	TPEGIIPSMFEPEREKV
69	18	SMFEPEREKVDAIDGEYR
70	17	KVDAIDGEYRLRGEARK
71	18	EYRLRGEARKTFVDLMRR
72	18	RKTFVDLMRRGDLPVWLA
73	18	RRGDLPVWLAYRVAAEGI
74	17	LAYRVAAEGINYADRRW
75	16	EGINYADRRWCDFGIK
76	15	DRRWCFDGIKNNQIL
77	18	FDGIKNNQILEENVEVEI
78	18	ILEENVEVEIWTKEGERK
79	17	EIWTKEGERKCLKPRWL
80	15	ERKCLKPRWLDKIY
81	17	KPRWLDKIYSDPLALK
82	17	KIYSDPLALKEFKEFAA
83	13	ALKEFKEFAAGRK

Table 2			
Peptide	Solubility	Solvent	Reconstitution pH, if required
1		20% acetonitrile in water	
2		20% acetonitrile in water	
3		20% acetonitrile in water	
4		Water	
5		Water	
6		20% acetonitrile in water	
7		20% acetonitrile in water	
8		Water	
9		Water	
10		Water	
11		20% acetonitrile and water	
12		1% ammonium hydroxide and 10% acetonitrile in water	
13		20% acetonitrile and water	
14		Water	
15		20% acetonitrile in water	
16		20% acetonitrile in water	
17		20% acetonitrile in water	
18		20% acetonitrile in water	
19		20% acetonitrile in water	
20		Water	
21		20% acetonitrile in water	
22		10% acetonitrile in water	
23		Water	
24		Water	
25		20% acetonitrile in water	
26		Water	
27		Water	
28		Water	
29		Water	
30		20% acetonitrile in water	
31		20% acetonitrile in water	
32		Water	
33		Water	
34		Water	
35		20% acetonitrile in water	
36		20% acetonitrile in water	
37		20% acetonitrile in water	
38		1% ammonium hydroxide and 10% acetonitrile in water	
39		Water	
40		20% acetonitrile in water	
41		20% acetic acid in water	
42		Water	

Table 2 (continued)			
Peptide	Solubility	Solvent	Reconstitution pH, if required
43		10% acetonitrile in water	
44		20% acetonitrile in water	
45		20% acetonitrile in water	
46		20% acetonitrile in water	
47		20% acetonitrile in water	
48		20% acetonitrile in water	
49		20% acetonitrile in water	
50		Water	
51		Water	
52		Water	
53		20% acetonitrile in water	
54		1% ammonium hydroxide and 10% acetonitrile in water	
55		1% ammonium hydroxide and 10% acetonitrile in water	
56		Water	
57		Water	
58		Water	
59		Water	
60		Water	
61		Water	
62		Water	
63		Water	
64		Water	
65		Water	
66		Water	
67		1% ammonium hydroxide and 10% acetonitrile in water	
68		10% acetonitrile in water	
69		0.01% ammonium hydroxide in water	pH 8.0
70		Water	
71		Water	
72		Water	
73		Water	
74		Water	
75		Water	
76		Water	
77		5% ammonium hydroxide in water	
78		10% acetonitrile in water	
79		Water	
80		Water	
81		Water	
82		Water	
83		Water	