

**Peptide Array, Dengue Virus Type 4 (DEN-4),
Singapore/8976/1995, NS1 Protein****Catalog No. NR-2755**

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Product Description:

The 61-peptide array spans the NS1 protein of Dengue virus type 4, Singapore/8976/1995 (GenPept: AAV31422).¹ Peptides are 13- to 17-mers, with 11 or 12 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 -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 in medium 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 4 (DEN-4), Singapore/8976/1995, NS1 Protein, NR-2755."

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.

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P.O. Box 4137

Manassas, VA 20108-4137 USA

www.beiresources.org

800-359-7370

Fax: 703-365-2898

E-mail: contact@beiresources.org

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References:

1. Yoong, L. P., et al. "Dengue Virus Type 4 Strain Singapore 8976/95, Complete Genome." Unpublished. GenPept: AAV31422.

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Table 1		
Peptide	Length	Sequence
1 of 61	16	1 DMGCVVSWGKELKCG 16
2 of 61	17	6 VSWGKELKCGSGIFVA 22
3 of 61	17	11 KELKCGSGIFVADNVHT 27
4 of 61	17	17 SGIFVADNVHTWTEQYK 33
5 of 61	15	23 DNVHTWTEQYKFQPE 37
6 of 61	17	27 TWTEQYKFQPESPARLA 43
7 of 61	17	33 KQPESPARLASAILNA 49
8 of 61	16	39 PARLASAILNAHKDGV 54
9 of 61	17	44 SAILNAHKDGVCGIRST 60
10 of 61	17	50 HKDGVCGIRSTTRLENV 66
11 of 61	17	56 GIRSTTRLENVMWKQIT 72
12 of 61	17	62 RLENVMWKQITNELNYV 78
13 of 61	17	68 WKQITNELNYVLWEGGH 84
14 of 61	17	73 NELNYVLWEGGHDLTVV 89
15 of 61	17	79 LWEGGHDLTVVAGDVKG 95
16 of 61	17	85 DLTVVAGDVKGVLTKGK 101
17 of 61	15	91 GVDKGVLTGKGRALT 105
18 of 61	17	95 GVLTKGKRALTTPPVNDL 111
19 of 61	17	101 KRALTTPPVNDLKYSWKT 117
20 of 61	17	107 PVNDLKYSWKTWGKAKI 123
21 of 61	17	113 YSWKTWGKAKIFTPEAR 129
22 of 61	17	119 GKAKIFTPEARNSTFLI 135
23 of 61	16	125 TPEARNSTFLIDGPD 140
24 of 61	17	130 NSTFLIDGPDSECPNE 146
25 of 61	17	136 DGPDTSECPNERRAWNF 152
26 of 61	17	141 SECPNERRAWNFLEVED 157
27 of 61	17	147 RRAWNFLEVEDYGF 163
28 of 61	17	153 LEVEDYGF 169
29 of 61	16	159 GFGMFTTNIMK 174
30 of 61	17	164 TTNIMKFREGSSEVCD 180
31 of 61	17	170 KFREGSSEVCDHRLMSA 186
32 of 61	17	176 SEVCDHRLMSAAIKDQK 192
33 of 61	17	182 RLMSAAIKDQKAVHAD 198
34 of 61	16	188 IKDQKAVHADMGY 203
35 of 61	17	193 AVHADMGYWIESSKNQT 209

Table 1		
Peptide	Length	Sequence
36 of 61	17	199 GYWIESSKNQTWQIEKA 215
37 of 61	17	205 SKNQTWQIEKASLIEVK 221
38 of 61	16	210 WQIEKASLIEVKTCLW 225
39 of 61	17	215 ASLIEVKTCLWPKHTL 231
40 of 61	17	221 KTCLWPKHTLWSNGVL 237
41 of 61	17	227 KHTLWSNGVLESQMLI 243
42 of 61	17	233 SNGVLESQMLIPKSYAG 249
43 of 61	17	239 SQMLIPKSYAGPFSQHN 255
44 of 61	17	245 KSYAGPFSQHNYRQGYA 261
45 of 61	16	251 FSQHNYRQGYATQTVG 266
46 of 61	17	256 YRQGYATQTVGPWHLGK 272
47 of 61	17	262 TQTVGPWHLGKLEIDFG 278
48 of 61	17	268 WHLGKLEIDFGECPGTT 284
49 of 61	17	273 LEIDFGECPGTTVTIQE 289
50 of 61	17	278 GECPGTTVTIQEDCDHR 294
51 of 61	17	284 TVTIQEDCDHRGPSLRT 300
52 of 61	17	290 DCDHRGPSLRTTTASGK 306
53 of 61	16	296 PSLRTTTASGKLVTQW 311
54 of 61	17	301 TTASGKLVTQWCCRST 317
55 of 61	17	307 LVTQWCCRSTMPPLRF 323
56 of 61	16	313 CRSTMPPLRFLGEDG 328
57 of 61	17	318 MPPLRFLGEDGCWYGME 334
58 of 61	17	324 LGEDGCWYGMEIRPLSE 340
59 of 61	17	330 WYGMEIRPLSEKEENMV 346
60 of 61	17	336 RPLSEKEENMVKSQVTA 352
61 of 61	13	341 KEENMVKSQVTAG 353

Table 2		
Peptide	Solubility	Solvent
1 of 61	1 mg/mL	100% DMSO
2 of 61	1 mg/mL	100% DMSO
3 of 61	1 mg/mL	100% DMSO
4 of 61	1 mg/mL	100% DMSO
5 of 61	1 mg/mL	0.05% trifluoroacetic acid in water
6 of 61	1 mg/mL	0.05% trifluoroacetic acid in water
7 of 61	1 mg/mL	0.05% trifluoroacetic acid in water
8 of 61	1 mg/mL	70% acetonitrile in water
9 of 61	1 mg/mL	70% acetonitrile in water
10 of 61	1 mg/mL	70% acetonitrile in water
11 of 61	1 mg/mL	100% DMSO
12 of 61	1 mg/mL	100% DMSO
13 of 61	1 mg/mL	100% DMSO
14 of 61	1 mg/mL	100% DMSO
15 of 61	1 mg/mL	70% acetonitrile in water

Table 2		
Peptide	Solubility	Solvent
16 of 61	1 mg/mL	70% acetonitrile in water
17 of 61	1 mg/mL	0.05% trifluoroacetic acid in water
18 of 61	1 mg/mL	0.05% trifluoroacetic acid in water
19 of 61	1 mg/mL	70% acetonitrile in water
20 of 61	1 mg/mL	70% acetonitrile in water
21 of 61	1 mg/mL	70% acetonitrile in water
22 of 61	1 mg/mL	70% acetonitrile in water
23 of 61	1 mg/mL	0.05% trifluoroacetic acid in water
24 of 61	1 mg/mL	70% acetonitrile in water
25 of 61	1 mg/mL	0.05% trifluoroacetic acid in water
26 of 61	1 mg/mL	70% acetonitrile in water
27 of 61	1 mg/mL	70% acetonitrile in water
28 of 61	1 mg/mL	100% DMSO
29 of 61	1 mg/mL	100% DMSO
30 of 61	1 mg/mL	100% DMSO
31 of 61	1 mg/mL	70% acetonitrile in water
32 of 61	1 mg/mL	100% DMSO
33 of 61	1 mg/mL	70% acetonitrile in water
34 of 61	1 mg/mL	70% acetonitrile in water
35 of 61	1 mg/mL	100% DMSO
36 of 61	1 mg/mL	70% acetonitrile in water
37 of 61	1 mg/mL	100% DMSO
38 of 61	1 mg/mL	70% acetonitrile in water
39 of 61	1 mg/mL	70% acetonitrile in water
40 of 61	1 mg/mL	70% acetonitrile in water
41 of 61	1 mg/mL	70% acetonitrile in water
42 of 61	1 mg/mL	70% acetonitrile in water
43 of 61	1 mg/mL	0.05% trifluoroacetic acid in water
44 of 61	1 mg/mL	70% acetonitrile in water
45 of 61	1 mg/mL	70% acetonitrile in water
46 of 61	1 mg/mL	70% acetonitrile in water
47 of 61	1 mg/mL	70% acetonitrile in water
48 of 61	1 mg/mL	100% DMSO
49 of 61	1 mg/mL	100% DMSO
50 of 61	1 mg/mL	70% acetonitrile in water
51 of 61	1 mg/mL	70% acetonitrile in water
52 of 61	1 mg/mL	70% acetonitrile in water
53 of 61	1 mg/mL	100% DMSO
54 of 61	1 mg/mL	100% DMSO
55 of 61	1 mg/mL	100% DMSO
56 of 61	1 mg/mL	70% acetonitrile in water
57 of 61	1 mg/mL	70% acetonitrile in water
58 of 61	1 mg/mL	0.05% trifluoroacetic acid in water
59 of 61	1 mg/mL	0.05% trifluoroacetic acid in water
60 of 61	1 mg/mL	100% DMSO
61 of 61	1 mg/mL	70% acetonitrile in water