Peptide Array, Dengue Virus Type 3, Sleman/1978, E Protein

Catalog No. NR-511

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Contributor:

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Product Description:

The 68-peptide array spans the E protein of Dengue virus type 3, Sleman/1978 (GenPept: AAT69740).[1] Peptides are 12- 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 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 the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: Peptide Array, Dengue Virus Type 3, Sleman/1978, E Protein, NR-511."

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/bmbl5/bmbl5toc.htm.

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References:

1. Blaney, J. E. Jr., et al. "Genetically Modified, Live Attenuated Dengue Virus Type 3 Vaccine Candidates." Am. J. Trop. Med. Hyg. 71 (2004): 811–821. PubMed: 15642976. GenPept: AAT69740.

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Product Information Sheet for NR-511

Table 1		
Peptide	**Length**	**Sequence**
1	18	MRCVGVGNRDFVEGLSGA
2	17	RDFVEGLSGATWVDVVL
3	16	SGATWVDVVLEHGGCV
4	17	DVVLEHGGCVTTMAKNK
5	17	GCVTTMAKNKPTLDIEL
6	18	KNKPTLDIELQKTEATQL
7	18	ELQKTEATQLATLRKLCI
8	18	TQLATLRKLCIEGKITNV
9	15	LCIEGKITNVTTDSR
10	18	KITNVTTDSRCPTQGEAI
11	19	SRCPTQGEAILPEEQDQNH
12	17	ILPEEQDQNHVCKHTYV
13	15	DQNHVCKHTYVDRGW
14	17	CKHTYVDRGWGNGCGLF
15	16	RGWGNGCGLFGKGSLV
16	18	CGLFGKGSLVTCAKFQCL
17	18	LVTCAKFQCLESIEGKVV
18	17	CLESIEGKVVQHENLKY
19	17	KVVQHENLKYTVIITVH
20	17	LKYTVIITVHTGDQHQV
21	17	TVHTGDQHQVGNETQGV
22	18	HQVGNETQGVTAEITPQA
23	17	GVTAEITPQASTVEAIL
24	18	PQASTVEAILPEYGTLGL
25	18	ILPEYGTLGLECSPRTGL
26	18	GLECSPRTGLDFNEMILL
27	18	GLDFNEMILLTMKNKAWM
28	17	LLTMKNKAWMVHRQWFF
29	16	AWMVHRQWFFDLPLPW
30	15	RQWFFDLPLPWTSGA
31	17	DLPLPWTSGATTETPTW
32	17	SGATTETPTWNKKELLV
33	18	PTWNKKELLVTFKNAHAK
34	17	LVTFKNAHAKKQEVVVL

Table 1 (continued)		
Peptide	**Length**	**Sequence**
35	18	HAKKQEVVVLGSQEGAMH
36	16	VLGSQEGAMHTALTGA
37	18	GAMHTALTGATEIQTSGG
38	18	GATEIQTSGGTSIFAGHL
39	18	GGTSIFAGHLKCRLKMDK
40	18	HLKCRLKMDKLELKGMSY
41	18	DKLELKGMSYAMCLNAFV
42	15	SYAMCLNAFVLKKEV
43	18	LNAFVLKKEVSETQHGTI
44	17	EVSETQHGTILIKVEYK
45	18	GTILIKVEYKGEDAPCKI
46	20	YKGEDAPCKIPFSTEDGQGK
47	17	PFSTEDGQGKAHNGRLI
48	17	GQGKAHNGRLITANPVV
49	17	GRLITANPVVTKKEEPV
50	18	PVVTKKEEPVNIEAEPPF
51	17	PVNIEAEPPFGESNIVI
52	18	PPFGESNIVIGIGDKALK
53	16	VIGIGDKALKINWYKK
54	18	KALKINWYKKGSSIGKMF
55	18	KKGSSIGKMFEATARGAR
56	15	MFEATARGARRMAIL
57	17	ARGARRMAILGDTAWDF
58	17	AILGDTAWDFGSVGGVL
59	18	WDFGSVGGVLNSLGKMVH
60	17	VLNSLGKMVHQIFGSAY
61	17	MVHQIFGSAYTALFSGV
62	18	SAYTALFSGVSWIMKIGI
63	17	GVSWIMKIGIGVLLTWI
64	15	IGIGVLLTWIGLNSK
65	16	LLTWIGLNSKNTSMSF
66	18	LNSKNTSMSFSCIVIGII
67	18	SFSCIVIGIITLYLGAVV
68	12	IITLYLGAVVQA

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Table 2			
Peptide	**Solubility**	**Solvent**	**Reconstitution pH, if required**
1	1 mg/mL	Water	
2	1 mg/mL	30% acetonitrile in water	pH 8.0
3	1 mg/mL	30% acetonitrile in water	
4	1 mg/mL	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	50% acetonitrile in 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	50% acetonitrile in water	
27	1 mg/mL	30% acetonitrile in water	
28	1 mg/mL	Water	
29	1 mg/mL	50% acetonitrile in 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	70% acetonitrile in water	
38	1 mg/mL	Water	
39	1 mg/mL	Water	
40	1 mg/mL	Water	

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Table 2 (continued)			
Peptide	**Solubility**	**Solvent**	**Reconstitution pH, if required**
41	1 mg/mL	30% acetonitrile in water	pH 8.0
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	40% acetonitrile in water	
58	1 mg/mL	Water	pH 8.0
59	1 mg/mL	Water	
60	1 mg/mL	Water	
61	1 mg/mL	70% acetonitrile in water	
62	1 mg/mL	Formic acid	
63	1 mg/mL	Formic acid	
64	1 mg/mL	Water	
65	1 mg/mL	Formic acid	
66	1 mg/mL	70% acetonitrile in water	
67	1 mg/mL	Formic acid	
68	1 mg/mL	Formic acid	

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