Product Information Sheet for NR-18967

Peptide Array, Influenza Virus B/Malaysia/2506/2004 Hemagglutinin Protein

Catalog No. NR-18967

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Contributor:

NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH

Manufacturer:

New England Peptide, LLC.

Product Description:

The 95-peptide array spans the hemagglutinin (HA) protein of the B/Malaysia/2506/2004 strain of influenza virus (GenPept: ABU99194.1).[1] Peptides are 16- to 18-mers, with 9 to 12 amino acid overlaps. Peptide 93 is unavailable at this time. An additional arginine was added to the C-terminal end of peptide 94. 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 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 -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, Influenza Virus B/Malaysia/2506/2004 Hemagglutinin Protein, NR-18967."

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. Komadina, N. Direct submission (2007). GenPept: ABU99194.1.

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Support Provided by NIAID

Table 1

Peptide	Length	Sequence
01 of 95	17	1-LSTHGSTSNADRICTGI-17
02 of 95	18	7-TSNADRICTGITSSNSPH-24
03 of 95	17	13-ICTGITSSNSPHVVKTA-29
04 of 95	17	19-SSNSPHVVKTATQGEVN-35
05 of 95	18	25-VVKTATQGEVNVTGVIPL-42
06 of 95	16	32-GEVNVTGVIPLTTTPT-47
07 of 95	17	37-TGVIPLTTTPTKSHFAN-53
08 of 95	16	44-TTPTKSHFANLKGTET-59
09 of 95	18	49-SHFANLKGTETRGKLCPK-66
10 of 95	17	55-KGTETRGKLCPKCLNCT-71
11 of 95	17	61-GKLCPKCLNCTDLDVAL-77
12 of 95	17	67-CLNCTDLDVALGRPKCT-83
13 of 95	17	73-LDVALGRPKCTGNIPSA-89
14 of 95	17	79-RPKCTGNIPSARVSILH-95
15 of 95	17	85-NIPSARVSILHEVRPVT-101
16 of 95	17	91-VSILHEVRPVTSGCFPI-107
17 of 95	17	97-VRPVTSGCFPIMHDRTK-113
18 of 95	17	103-GCFPIMHDRTKIRQLPK-119
19 of 95	17	109-HDRTKIRQLPKLLRGYE-125
20 of 95	17	115-RQLPKLLRGYEHIRLST-131
21 of 95	17	121-LRGYEHIRLSTHNVINA-137
22 of 95	17	127-IRLSTHNVINAENAPGG-143
23 of 95	17	133-NVINAENAPGGPYKIGT-149
24 of 95	17	139-NAPGGPYKIGTSGSCPN-155
25 of 95	17	145-YKIGTSGSCPNVTNGNG-161
26 of 95	17	151-GSCPNVTNGNGFFATMA-167
27 of 95	17	157-TNGNGFFATMAWAVPKN-173
28 of 95	17	163-FATMAWAVPKNDNNKTA-179
29 of 95	17	169-AVPKNDNNKTATNSLTI-185
30 of 95	17	175-NNKTATNSLTIEVPYIC-191
31 of 95	17	181-NSLTIEVPYICTEGEDQ-197
32 of 95	17	187-VPYICTEGEDQITVWGF-203
33 of 95	17	193-EGEDQITVWGFHSDNET-209
34 of 95	17	199-TVWGFHSDNETQMAKLY-215

Table 1		
Peptide	**Length**	**Sequence**
35 of 95	17	205-SDNETQMAKLYGDSKPQ-221
36 of 95	17	211-MAKLYGDSKPQKFTSSA-227
37 of 95	17	217-DSKPQKFTSSANGVTTH-233
38 of 95	17	223-FTSSANGVTTHYVSQIG-239
39 of 95	17	229-GVTTHYVSQIGGFPNQT-245
40 of 95	18	235-VSQIGGFPNQTEDGGLPQ-252
41 of 95	17	241-FPNQTEDGGLPQSGRIV-257
42 of 95	17	247-DGGLPQSGRIVVDYMVQ-263
43 of 95	17	253-SGRIVVDYMVQKSGKTG-269
44 of 95	17	259-DYMVQKSGKTGTITYQR-275
45 of 95	17	266-GKTGTITYQRGILLPQK-282
46 of 95	16	272-TYQRGILLPQKVWCAS-287
47 of 95	17	277-ILLPQKVWCASGRSKVI-293
48 of 95	17	283-VWCASGRSKVIKGSLPL-299
49 of 95	17	289-RSKVIKGSLPLIGEADC-305
50 of 95	17	295-GSLPLIGEADCLHEKYG-311
51 of 95	17	301-GEADCLHEKYGGLNKSK-317
52 of 95	17	307-HEKYGGLNKSKPYYTGE-323
53 of 95	17	313-LNKSKPYYTGEHAKAIG-329
54 of 95	17	319-YYTGEHAKAIGNCPIWV-335
55 of 95	17	325-AKAIGNCPIWVKTPLKL-341
56 of 95	17	331-CPIWVKTPLKLANGTKY-347
57 of 95	17	337-TPLKLANGTKYRPPAKL-353
58 of 95	17	343-NGTKYRPPAKLLKERGF-359
59 of 95	17	349-PPAKLLKERGFFGAIAG-365
60 of 95	17	355-KERGFFGAIAGFLEGGW-371
61 of 95	17	361-GAIAGFLEGGWEGMIAG-377
62 of 95	17	367-LEGGWEGMIAGWHGYTS-383
63 of 95	17	373-GMIAGWHGYTSHGAHGV-389
64 of 95	17	379-HGYTSHGAHGVAVAADL-395
65 of 95	17	385-GAHGVAVAADLKSTQEA-401
66 of 95	17	391-VAADLKSTQEAINKITK-407
67 of 95	17	397-STQEAINKITKNLNSLS-413
68 of 95	17	403-NKITKNLNSLSELEVKN-419
69 of 95	17	409-LNSLSELEVKNLQRLSG-425
70 of 95	17	415-LEVKNLQRLSGAMDELH-431
71 of 95	16	422-RLSGAMDELHNEILEL-437
72 of 95	17	427-MDELHNEILELDEKVDD-443
73 of 95	17	433-EILELDEKVDDLRADTI-449
74 of 95	17	439-EKVDDLRADTISSQIEL-455
75 of 95	17	445-RADTISSQIELAVLLSN-461
76 of 95	17	451-SQIELAVLLSNEGIINS-467
77 of 95	17	457-VLLSNEGIINSEDEHLL-473
78 of 95	17	463-GIINSEDEHLLALERKL-479

Table 1		
Peptide	**Length**	**Sequence**
79 of 95	18	469-DEHLLALERKLKKMLGPS-486
80 of 95	17	475-LERKLKKMLGPSAVEIG-491
81 of 95	17	481-KMLGPSAVEIGNGCFET-497
82 of 95	17	487-AVEIGNGCFETKHKCNQ-503
83 of 95	17	493-GCFETKHKCNQTCLDRI-509
84 of 95	17	499-HKCNQTCLDRIAAGTFD-515
85 of 95	17	505-CLDRIAAGTFDAGEFSL-521
86 of 95	17	511-AGTFDAGEFSLPTFDSL-527
87 of 95	17	517-GEFSLPTFDSLNITAAS-533
88 of 95	17	523-TFDSLNITAASLNDDGL-539
89 of 95	17	529-ITAASLNDDGLDNHTIL-545
90 of 95	17	535-NDDGLDNHTILLYYSTA-551
91 of 95	17	540-DNHTILLYYSTAASSLA-556
92 of 95	16	548-YSTAASSLAVTLMIAI-563
93 of 95	16	553-SSLAVTLMIAIFVVYM-568
94 of 95	17	560-MIAIFVVYMVSRDNVSR-575
95 of 95	16	565-VVYMVSRDNVSCSICL-580

Table 2		
Peptide	**Solubility**	**Solvent**
01 of 95	1 mg/mL	50% acetonitrile in water, dilute with water
02 of 95	1 mg/mL	50% acetonitrile in water
03 of 95	1 mg/mL	50% acetonitrile in water
04 of 95	1 mg/mL	50% acetonitrile in water
05 of 95	1 mg/mL	50% acetonitrile in water, dilute with water
06 of 95	1 mg/mL	50% acetonitrile in water
07 of 95	1 mg/mL	50% acetonitrile in water, dilute with water
08 of 95	1 mg/mL	50% acetonitrile in water
09 of 95	1 mg/mL	50% acetonitrile in water
10 of 95	1 mg/mL	50% acetonitrile in water
11 of 95	1 mg/mL	50% acetonitrile in water
12 of 95	1 mg/mL	50% acetonitrile in water
13 of 95	1 mg/mL	50% acetonitrile in water
14 of 95	1 mg/mL	50% acetonitrile in water
15 of 95	1 mg/mL	50% acetonitrile in water
16 of 95	1 mg/mL	50% acetonitrile in water
17 of 95	1 mg/mL	50% acetonitrile in water, dilute with water
18 of 95	1 mg/mL	50% acetonitrile in water
19 of 95	1 mg/mL	50% acetonitrile in water
20 of 95	1 mg/mL	50% acetonitrile in water
21 of 95	1 mg/mL	50% acetonitrile in water
22 of 95	1 mg/mL	50% acetonitrile in water

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Table 2		
Peptide	**Solubility**	**Solvent**
23 of 95	1 mg/mL	50% acetonitrile in water
24 of 95	1 mg/mL	50% acetonitrile in water
25 of 95	1 mg/mL	50% acetonitrile in water
26 of 95	1 mg/mL	100% DMSO
27 of 95	1 mg/mL	50% acetonitrile in water
28 of 95	1 mg/mL	50% acetonitrile in water
29 of 95	1 mg/mL	50% acetonitrile in water
30 of 95	1 mg/mL	100% water then 50% acetonitrile in water
31 of 95	1 mg/mL	50% acetonitrile in water
32 of 95	1 mg/mL	100% DMSO
33 of 95	1 mg/mL	100% acetic acid then 50% acetonitrile in water
34 of 95	1 mg/mL	50% acetonitrile in water
35 of 95	1 mg/mL	50% acetonitrile in water
36 of 95	1 mg/mL	50% acetonitrile in water
37 of 95	1 mg/mL	50% acetonitrile in water
38 of 95	1 mg/mL	50% acetonitrile in water
39 of 95	1 mg/mL	50% acetonitrile in water
40 of 95	1 mg/mL	50% acetonitrile in water
41 of 95	1 mg/mL	100% water then 50% acetonitrile in water
42 of 95	1 mg/mL	50% acetonitrile in water
43 of 95	1 mg/mL	50% acetonitrile in water
44 of 95	1 mg/mL	50% acetonitrile in water
45 of 95	1 mg/mL	50% acetonitrile in water, dilute with water
46 of 95	1 mg/mL	50% acetonitrile in water
47 of 95	1 mg/mL	50% acetonitrile in water, dilute with water
48 of 95	1 mg/mL	50% acetonitrile in water
49 of 95	1 mg/mL	50% acetonitrile in water
50 of 95	1 mg/mL	50% acetonitrile in water
51 of 95	1 mg/mL	50% acetonitrile in water
52 of 95	1 mg/mL	50% acetonitrile in water
53 of 95	1 mg/mL	50% acetonitrile in water
54 of 95	1 mg/mL	50% acetonitrile in water
55 of 95	1 mg/mL	50% acetonitrile in water
56 of 95	1 mg/mL	50% acetonitrile in water
57 of 95	1 mg/mL	50% acetonitrile in water, dilute with water
58 of 95	1 mg/mL	50% acetonitrile in water
59 of 95	1 mg/mL	50% acetonitrile in water
60 of 95	1 mg/mL	100% acetic acid then 50% acetonitrile in water
61 of 95	1 mg/mL	100% DMSO
62 of 95	1 mg/mL	100% DMSO
63 of 95	1 mg/mL	50% acetonitrile in water
64 of 95	1 mg/mL	50% acetonitrile in water
65 of 95	1 mg/mL	50% acetonitrile in water, dilute with water
66 of 95	1 mg/mL	50% acetonitrile in water

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Table 2		
Peptide	**Solubility**	**Solvent**
67 of 95	1 mg/mL	50% acetonitrile in water
68 of 95	1 mg/mL	100% water then 50% acetonitrile in water
69 of 95	1 mg/mL	50% acetonitrile in water
70 of 95	1 mg/mL	50% acetonitrile in water
71 of 95	1 mg/mL	50% acetonitrile in water
72 of 95	1 mg/mL	50% acetonitrile in water
73 of 95	1 mg/mL	100% ammonium hydroxide then dilute with water
74 of 95	1 mg/mL	50% acetonitrile in water
75 of 95	1 mg/mL	50% acetonitrile in water
76 of 95	1 mg/mL	100% DMSO
77 of 95	1 mg/mL	50% acetonitrile in water, dilute with water
78 of 95	1 mg/mL	50% acetonitrile in water
79 of 95	1 mg/mL	50% acetonitrile in water
80 of 95	1 mg/mL	50% acetonitrile in water
81 of 95	1 mg/mL	50% acetonitrile in water
82 of 95	1 mg/mL	50% acetonitrile in water, dilute with water
83 of 95	1 mg/mL	50% acetonitrile in water
84 of 95	1 mg/mL	50% acetonitrile in water
85 of 95	1 mg/mL	50% acetonitrile in water, dilute with water
86 of 95	1 mg/mL	50% acetonitrile in water
87 of 95	1 mg/mL	50% acetonitrile in water
88 of 95	1 mg/mL	100% acetic acid then 50% acetonitrile in water
89 of 95	1 mg/mL	50% acetonitrile in water
90 of 95	1 mg/mL	50% acetonitrile in water
91 of 95	1 mg/mL	50% acetonitrile in water
92 of 95	1 mg/mL	100% DMSO
93 of 95	N/A	N/A
94 of 95	1 mg/mL	100% DMSO
95 of 95	1 mg/mL	50% acetonitrile in water