Product Information Sheet for NR-4766

Peptide Array, Hantaan Virus, 76-118, Nucleocapsid (N) Protein

Catalog No. NR-4766

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Contributor:

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Product Description:

The 74-peptide array spans the N protein of Hantaan virus, 76-118 (GenPept: P05133).[1] Peptides are 14- to 17-mers, with 11 to 13 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, Hantaan Virus, 76-118, Nucleocapsid (N) Protein, NR-4766."

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. Schmaljohn, C. S., et al. "Coding Strategy of the S Genome Segment of Hantaan Virus." Virology 155 (1986): 633–643. PubMed: 3024404. GenPept: P05133.

Support Provided by NIAID

Table 1

Peptide	Length	Sequence
1 of 74	17	1-MATMEELQREINAHEGQ-17
2 of 74	17	7-LQREINAHEGQLVIARQ-23
3 of 74	17	13-AHEGQLVIARQKVRDAE-29
4 of 74	17	19-VIARQKVRDAEKQYEKD-35
5 of 74	17	25-VRDAEKQYEKDPDELNK-41
6 of 74	17	30-KQYEKDPDELNKRTLTD-46
7 of 74	17	36-PDELNKRTLTDREGVAV-52
8 of 74	17	42-RTLTDREGVAVSIQAKI-58
9 of 74	17	47-REGVAVSIQAKIDELKR-63
10 of 74	17	53-SIQAKIDELKRQLADRI-69
11 of 74	17	59-DELKRQLADRIATGKNL-75
12 of 74	16	65-LADRIATGKNLGKEQD-80
13 of 74	16	70-ATGKNLGKEQDPTGVE-85
14 of 74	17	75-LGKEQDPTGVEPGDHLK-91
15 of 74	16	81-PTGVEPGDHLKERSML-96
16 of 74	17	86-PGDHLKERSMLSYGNVL-102
17 of 74	17	91-KERSMLSYGNVLDLNHL-107
18 of 74	17	97-SYGNVLDLNHLDIDEPT-113
19 of 74	17	103-DLNHLDIDEPTGQTADW-119
20 of 74	17	109-IDEPTGQTADWLSIIVY-125
21 of 74	17	114-GQTADWLSIIVYLTSFV-130
22 of 74	17	120-LSIIVYLTSFVVPILLK-136
23 of 74	17	126-LTSFVVPILLKALYMLT-142
24 of 74	17	132-PILLKALYMLTTRGRQT-148
25 of 74	17	138-LYMLTTRGRQTTKDNKG-154
26 of 74	17	144-RGRQTTKDNKGTRIRFK-160
27 of 74	17	150-KDNKGTRIRFKDDSSFE-166
28 of 74	17	156-RIRFKDDSSFEDVNGIR-172
29 of 74	17	162-DSSFEDVNGIRKPKHLY-178
30 of 74	17	168-VNGIRKPKHLYVSLPNA-184
31 of 74	17	174-PKHLYVSLPNAQSSMKA-190
32 of 74	17	180-SLPNAQSSMKAEEITPG-196

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Table 1		
Peptide	**Length**	**Sequence**
33 of 74	17	186-SSMKAEEITPGRYRTAV-202
34 of 74	17	190-AEEITPGRYRTAVCGLY-206
35 of 74	17	196-GRYRTAVCGLYPAQIKA-212
36 of 74	15	202-VCGLYPAQIKARQMI-216
37 of 74	17	206-YPAQIKARQMISPVMSV-222
38 of 74	17	212-ARQMISPVMSVIGFLAL-228
39 of 74	17	218-PVMSVIGFLALAKDWSD-234
40 of 74	17	224-GFLALAKDWSDRIEQWL-240
41 of 74	17	230-KDWSDRIEQWLIEPCKL-246
42 of 74	17	236-IEQWLIEPCKLLPDTAA-252
43 of 74	17	241-IEPCKLLPDTAAVSLLG-257
44 of 74	17	247-LPDTAAVSLLGGPATNR-263
45 of 74	17	253-VSLLGGPATNRDYLRQR-269
46 of 74	17	259-PATNRDYLRQRQVALGN-275
47 of 74	16	265-YLRQRQVALGNMETKE-280
48 of 74	17	269-RQVALGNMETKESKAIR-285
49 of 74	17	275-NMETKESKAIRQHAEAA-291
50 of 74	17	281-SKAIRQHAEAAGCSMIE-297
51 of 74	14	287-HAEAAGCSMIEDIE-300
52 of 74	17	290-AAGCSMIEDIESPSSIW-306
53 of 74	16	296-IEDIESPSSIWVFAGA-311
54 of 74	14	301-SPSSIWVFAGAPDR-314
55 of 74	17	304-SIWVFAGAPDRCPPTCL-320
56 of 74	17	310-GAPDRCPPTCLFIAGIA-326
57 of 74	17	316-PPTCLFIAGIAELGAFF-332
58 of 74	17	322-IAGIAELGAFFSILQDM-338
59 of 74	17	328-LGAFFSILQDMRNTIMA-344
60 of 74	17	334-ILQDMRNTIMASKTVGT-350
61 of 74	17	340-NTIMASKTVGTSEEKLR-356
62 of 74	17	346-KTVGTSEEKLRKKSSFY-362
63 of 74	17	351-SEEKLRKKSSFYQSYLR-367
64 of 74	17	357-KKSSFYQSYLRRTQSMG-373
65 of 74	17	362-YQSYLRRTQSMGIQLGQ-378
66 of 74	17	368-RTQSMGIQLGQRIIVLF-384
67 of 74	17	374-IQLGQRIIVLFMVAWGK-390
68 of 74	17	380-IIVLFMVAWGKEAVDNF-396
69 of 74	17	386-VAWGKEAVDNFHLGDDM-402
70 of 74	17	392-AVDNFHLGDDMDPELRT-408
71 of 74	17	398-LGDDMDPELRTLAQSLI-414
72 of 74	17	404-PELRTLAQSLIDVKVKE-420
73 of 74	16	410-AQSLIDVKVKEISNQE-425
74 of 74	15	415-DVKVKEISNQEPLKL-429

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Table 2			
Peptide	**Solubility**	**Solvent**	**Reconstitution pH, if required**
1 of 74	1 mg/mL	10% acetonitrile in water	pH 6
2 of 74	1 mg/mL	10% acetonitrile in water	pH 6
3 of 74	1 mg/mL	10% acetonitrile in water	pH 6
4 of 74	1 mg/mL	10% acetonitrile in water	pH 6
5 of 74	1 mg/mL	10% acetonitrile in water	pH 6
6 of 74	1 mg/mL	10% acetonitrile in water	pH 6
7 of 74	1 mg/mL	10% acetonitrile in water	pH 6
8 of 74	1 mg/mL	10% acetonitrile in water	pH 6
9 of 74	1 mg/mL	10% acetonitrile in water	pH 6
10 of 74	1 mg/mL	20% acetonitrile in water	pH 6
11 of 74	1 mg/mL	10% acetonitrile in water	pH 6
12 of 74	1 mg/mL	10% acetonitrile in water	pH 6
13 of 74	1 mg/mL	10% acetonitrile in water	pH 6
14 of 74	1 mg/mL	10% acetonitrile in water	pH 6
15 of 74	1 mg/mL	10% acetonitrile in water	pH 6
16 of 74	1 mg/mL	10% acetonitrile in water	pH 6
17 of 74	1 mg/mL	10% acetonitrile in water	pH 6
18 of 74	1 mg/mL	10% acetonitrile and 0.02% ammonium hydroxide in water	pH 8
19 of 74	1 mg/mL	10% acetonitrile in water	pH 6
20 of 74	1 mg/mL	28% acetonitrile and 0.02% ammonium hydroxide in water	pH 8
21 of 74	1 mg/mL	5% ammonium hydroxide in water	pH 11
22 of 74	1 mg/mL	40% acetonitrile in water	pH 6
23 of 74	1 mg/mL	30% acetonitrile in water	pH 6
24 of 74	1 mg/mL	20% acetonitrile in water	pH 6
25 of 74	1 mg/mL	10% acetonitrile in water	pH 6
26 of 74	1 mg/mL	10% acetonitrile in water	pH 6
27 of 74	1 mg/mL	10% acetonitrile in water	pH 6
28 of 74	1 mg/mL	10% acetonitrile in water	pH 6
29 of 74	1 mg/mL	10% acetonitrile in water	pH 6
30 of 74	1 mg/mL	10% acetonitrile in water	pH 6
31 of 74	1 mg/mL	10% acetonitrile in water	pH 6
32 of 74	1 mg/mL	10% acetonitrile in water	pH 6
33 of 74	1 mg/mL	10% acetonitrile in water	pH 6
34 of 74	1 mg/mL	10% acetonitrile in water	pH 6
35 of 74	1 mg/mL	10% acetonitrile in water	pH 6
36 of 74	1 mg/mL	10% acetonitrile in water	pH 6
37 of 74	1 mg/mL	10% acetonitrile in water	pH 6
38 of 74	1 mg/mL	30% acetonitrile in water	pH 6
39 of 74	1 mg/mL	48% acetonitrile and 0.02% ammonium hydroxide in water	pH 8
40 of 74	1 mg/mL	30% acetonitrile in water	pH 6

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Table 2			
Peptide	**Solubility**	**Solvent**	**Reconstitution pH, if required**
41 of 74	1 mg/mL	20% acetonitrile in water	pH 6
42 of 74	1 mg/mL	20% acetonitrile and 0.1% trifluoroacetic acid in water	pH 2
43 of 74	1 mg/mL	20% acetonitrile in water	pH 6
44 of 74	1 mg/mL	10% acetonitrile in water	pH 6
45 of 74	1 mg/mL	10% acetonitrile in water	pH 6
46 of 74	1 mg/mL	10% acetonitrile in water	pH 6
47 of 74	1 mg/mL	10% acetonitrile in water	pH 6
48 of 74	1 mg/mL	10% acetonitrile in water	pH 6
49 of 74	1 mg/mL	10% acetonitrile in water	pH 6
50 of 74	1 mg/mL	10% acetonitrile and 0.1% trifluoroacetic acid in water	pH 2
51 of 74	1 mg/mL	20% acetonitrile and 0.02% ammonium hydroxide in water	pH 8
52 of 74	1 mg/mL	20% acetonitrile and 0.02% ammonium hydroxide in water	pH 8
53 of 74	1 mg/mL	18% acetonitrile and 0.02% ammonium hydroxide in water	pH 8
54 of 74	1 mg/mL	10% acetonitrile in water	pH 6
55 of 74	1 mg/mL	5% ammonium hydroxide in water	pH 11
56 of 74	1 mg/mL	10% acetonitrile in water	pH 6
57 of 74	1 mg/mL	5% ammonium hydroxide in water	pH 11
58 of 74	1 mg/mL	40% acetonitrile and 0.02% ammonium hydroxide in water	pH 8
59 of 74	1 mg/mL	38% acetonitrile and 2% formic acid in water	pH 4
60 of 74	1 mg/mL	10% acetonitrile in water	pH 6
61 of 74	1 mg/mL	10% acetonitrile in water	pH 6
62 of 74	1 mg/mL	10% acetonitrile in water	pH 6
63 of 74	1 mg/mL	10% acetonitrile in water	pH 6
64 of 74	1 mg/mL	10% acetonitrile in water	pH 6
65 of 74	1 mg/mL	10% acetonitrile in water	pH 6
66 of 74	1 mg/mL	30% acetonitrile in water	pH 6
67 of 74	1 mg/mL	30% acetonitrile in water	pH 6
68 of 74	1 mg/mL	30% acetonitrile in water	pH 6
69 of 74	1 mg/mL	18% acetonitrile and 0.2% ammonium hydroxide in water	pH 8
70 of 74	1 mg/mL	10% acetonitrile in water	pH 6
71 of 74	1 mg/mL	20% acetonitrile in water	pH 6
72 of 74	1 mg/mL	20% acetonitrile in water	pH 6
73 of 74	1 mg/mL	20% acetonitrile in water	pH 6
74 of 74	1 mg/mL	10% acetonitrile in water	pH 6

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