Product Information Sheet for NR-3749

Peptide Array, Hepatitis C Virus, H77, E2 Protein

Catalog No. NR-3749

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Contributor:

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

Manufacturer:

Bio-Synthesis, Inc.

Product Description:

The 56-peptide array spans the E2 protein of hepatitis C virus, H77 (genotype 1a; GenPept: AAB67036).[1] Peptides are 13- to 19-mers, with 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 -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, Hepatitis C Virus, H77, E2 Protein, NR-3749."

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. Yanagi, M., et al. "Transcripts from a Single Full-length cDNA Clone of Hepatitis C Virus Are Infectious When Directly Transfected into the Liver of a Chimpanzee." Proc. Natl. Acad. Sci. U. S. A. 94 (1997): 8738-8743. PubMed: 9238047. GenPept: AAB67036.

Support Provided by NIAID

Table 1

Peptide	Length	Sequence
1 of 56	17	1 ETHVTGGNAGRTTAGLV 17
2 of 56	18	7 GNAGRTTAGLVGLLTPGA 24
3 of 56	18	14 AGLVGLLTPGAKQNIQLI 31
4 of 56	18	21 TPGAKQNIQLINTNGSWH 38
5 of 56	17	28 IQLINTNGSWHINSTAL 44
6 of 56	17	34 NGSWHINSTALNCNESL 50
7 of 56	17	40 NSTALNCNESLNTGWLA 56
8 of 56	18	46 CNESLNTGWLAGLFYQHK 63
9 of 56	18	53 GWLAGLFYQHKFNSSGCP 70
10 of 56	18	60 YQHKFNSSGCPERLASCR 77
11 of 56	17	67 SGCPERLASCRRLTDFA 83
12 of 56	17	73 LASCRRLTDFAQGWGPI 89
13 of 56	19	79 LTDFAQGWGPISYANGSGL 97
14 of 56	18	87 GPISYANGSGLDERPYCW 104
15 of 56	16	94 GSGLDERPYCWHYPPR 109
16 of 56	18	99 ERPYCWHYPPRPCGIVPA 116
17 of 56	18	106 YPPRPCGIVPAKSVCGPV 123
18 of 56	19	113 IVPAKSVCGPVYCFTPSPV 131
19 of 56	18	121 GPVYCFTPSPVVVGTTDR 138
20 of 56	17	128 PSPVVVGTTDRSGAPTY 144
21 of 56	15	134 GTTDRSGAPTYSWGA 148
22 of 56	18	138 RSGAPTYSWGANDTDVFV 155
23 of 56	16	145 SWGANDTDVFVLNNTR 160
24 of 56	18	150 DTDVFVLNNTRPPLGNWF 167
25 of 56	16	157 NNTRPPLGNWFGCTWM 172
26 of 56	18	162 PLGNWFGCTWMNSTGFTK 179
27 of 56	15	169 CTWMNSTGFTKVCGA 183
28 of 56	16	173 NSTGFTKVCGAPPCVI 188

Table 1		
Peptide	**Length**	**Sequence**
29 of 56	19	178 TKVCGAPPCVIGGVGNNTL 196
30 of 56	18	186 CVIGGVGNNTLLCPTDCF 203
31 of 56	17	193 NNTLLCPTDCFRKHPEA 209
32 of 56	15	199 PTDCFRKHPEATYSR 213
33 of 56	18	203 FRKHPEATYSRCGSGPWI 220
34 of 56	17	210 TYSRCGSGPWITPRCMV 226
35 of 56	18	216 SGPWITPRCMVDYPYRLW 233
36 of 56	17	223 RCMVDYPYRLWHYPCTI 239
37 of 56	18	229 PYRLWHYPCTINYTIFKV 246
38 of 56	18	236 PCTINYTIFKVRMYVGGV 253
39 of 56	18	243 IFKVRMYVGGVEHRLEAA 260
40 of 56	16	250 VGGVEHRLEAACNWTR 265
41 of 56	17	255 HRLEAACNWTRGERCDL 271
42 of 56	16	261 CNWTRGERCDLEDRDR 276
43 of 56	18	266 GERCDLEDRDRSELSPLL 283
44 of 56	17	273 DRDRSELSPLLLSTTQW 289
45 of 56	18	279 LSPLLLSTTQWQVLPCSF 296
46 of 56	17	286 TTQWQVLPCSFTTLPAL 302
47 of 56	18	292 LPCSFTTLPALSTGLIHL 309
48 of 56	18	299 LPALSTGLIHLHQNIVDV 316
49 of 56	17	306 LIHLHQNIVDVQYLYGV 322
50 of 56	18	312 NIVDVQYLYGVGSSIASW 329
51 of 56	18	319 LYGVGSSIASWAIKWEYV 336
52 of 56	18	326 IASWAIKWEYVVLLFLLL 343
53 of 56	16	333 WEYVVLLFLLLADARV 348
54 of 56	18	338 LLFLLLADARVCSCLWMM 355
55 of 56	17	345 DARVCSCLWMMLLISQA 361
56 of 56	13	351 CLWMMLLISQAEA 363

Table 2		
Peptide	**Solubility**	**Solvent**
1 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
2 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
3 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
4 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
5 of 56	1 mg/mL	100% DMSO
6 of 56	1 mg/mL	100% DMSO
7 of 56	1 mg/mL	100% DMSO

Table 2		
Peptide	**Solubility**	**Solvent**
8 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
9 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
10 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
11 of 56	1 mg/mL	100% DMSO
12 of 56	1 mg/mL	70% acetonitrile and 0.05% trifluoroacetic acid in water
13 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
14 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
15 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
16 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
17 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
18 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
19 of 56	1 mg/mL	70% acetonitrile and 0.05% trifluoroacetic acid in water
20 of 56	1 mg/mL	70% acetonitrile and 0.05% trifluoroacetic acid in water
21 of 56	1 mg/mL	70% acetonitrile and 0.05% trifluoroacetic acid in water
22 of 56	1 mg/mL	70% acetonitrile and 0.05% trifluoroacetic acid in water
23 of 56	1 mg/mL	70% acetonitrile and 0.05% trifluoroacetic acid in water
24 of 56	1 mg/mL	100% DMSO
25 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
26 of 56	1 mg/mL	70% acetonitrile and 0.05% trifluoroacetic acid in water
27 of 56	1 mg/mL	70% acetonitrile and 0.05% trifluoroacetic acid in water
28 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
29 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
30 of 56	1 mg/mL	100% DMSO
31 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
32 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
33 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
34 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
35 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
36 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
37 of 56	1 mg/mL	70% acetonitrile in water
38 of 56	1 mg/mL	70% acetonitrile and 0.05% trifluoroacetic acid in water
39 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
40 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
41 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
42 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
43 of 56	1 mg/mL	70% acetonitrile and 0.05% trifluoroacetic acid in water
44 of 56	1 mg/mL	70% acetonitrile and 0.05% trifluoroacetic acid in water
45 of 56	1 mg/mL	100% DMSO
46 of 56	1 mg/mL	70% acetonitrile and 0.05% trifluoroacetic acid in water

Table 2		
Peptide	**Solubility**	**Solvent**
47 of 56	1 mg/mL	70% acetonitrile and 0.05% trifluoroacetic acid in water
48 of 56	1 mg/mL	70% acetonitrile and 0.05% trifluoroacetic acid in water
49 of 56	1 mg/mL	0.05% trifluoroacetic acid in water
50 of 56	1 mg/mL	100% DMSO
51 of 56	1 mg/mL	100% DMSO
52 of 56	1 mg/mL	100% DMSO
53 of 56	1 mg/mL	100% DMSO
54 of 56	1 mg/mL	100% DMSO
55 of 56	1 mg/mL	100% DMSO
56 of 56	1 mg/mL	100% DMSO