

Peptide Array, Hepatitis C Virus, H77, NS5A Protein

Catalog No. NR-3755

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Contributor:

BEI Resources

Manufacturer:

Bio-Synthesis, Inc.

Product Description:

The 71-peptide array spans the NS5A 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 BEI Resources, NIAID, NIH: Peptide Array, Hepatitis C Virus, H77, NS5A Protein, NR-3755."

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.

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Table 1		
Peptide	Length	Sequence
1 of 71	16	1 SGSWLRDIWDWICEVL 16
2 of 71	18	6 RDIWDWICEVLSDFKTWL 23
3 of 71	16	13 CEVLSDFKTWLKAKLM 28
4 of 71	17	18 DFKTWLKAKLMPQLPGI 34
5 of 71	18	24 KAKLMPQLPGIPFVSCQR 41
6 of 71	18	31 LPGIPFVSCQRGYRGVWR 48
7 of 71	17	38 SCQRGYRGVWRGDGIMH 54
8 of 71	18	44 RGVWRGDGIMHTRCHCGA 61
9 of 71	18	51 GIMHTRCHCGAEITGHVK 68
10 of 71	18	58 HCGAEITGHVKNGTMRIV 75
11 of 71	17	65 GHVKNGTMRIVGPRTCR 81
12 of 71	18	71 TMRIVGPRTCRNMWSGTF 88
13 of 71	16	78 RTCRNMWSGTFPINAY 93
14 of 71	19	83 MWSGTFPINAYTTGPCTPL 101
15 of 71	18	91 NAYTTGPCTPLPAPNYKF 108
16 of 71	18	98 CTPLPAPNYKFALWRVSA 115
17 of 71	18	105 NYKFALWRVSAEEYVEIR 122
18 of 71	18	112 RVSAEEYVEIRRVGDFHY 129
19 of 71	15	119 VEIRRVGDFHYVSGM 133
20 of 71	17	123 RVGDFHYVSGMTTDNLK 139
21 of 71	16	129 YVSGMTTDNLKCPCQI 144
22 of 71	17	134 TTDNLKCPCQIPSPEFF 150
23 of 71	18	140 CPCQIPSPEFFTELDGVR 157
24 of 71	16	147 PEFFTELDGVRLHRFA 162
25 of 71	18	152 ELDGVRLHRFAPPCKPLL 169
26 of 71	18	159 HRFAPPCKPLLREEVSFR 176
27 of 71	17	166 KPLLREEVSFRVGLHEY 182
28 of 71	17	172 EVSFRVGLHEYVPGSQL 188

Table 1		
Peptide	Length	Sequence
29 of 71	19	178 GLHEYVVGSQLPCEPEPDV 196
30 of 71	18	186 SQLPCEPEPDVAVLTSML 203
31 of 71	17	193 EPDVAVLTSMLTDP SHI 209
32 of 71	18	199 LTSMLTDP SHITAE AAGR 216
33 of 71	15	206 PSHITAE AAGRRLAR 220
34 of 71	18	210 TAE AAGRRLARGSPPSMA 227
35 of 71	18	217 RLARGSPPSMASSSASQL 234
36 of 71	18	224 PSMASSSASQLSAPSLKA 241
37 of 71	17	231 ASQLSAPSLKATCTANH 247
38 of 71	18	237 PSLKATCTANH DSDPAEL 254
39 of 71	18	244 TANH DSDPAELIEANLLW 261
40 of 71	15	251 DAELIEANLLWRQEM 265
41 of 71	18	255 IEANLLWRQEMGGNITRV 272
42 of 71	18	262 RQEMGGNITRVESENKVV 279
43 of 71	16	269 ITRVESENKVVILDSF 284
44 of 71	16	274 SENKVVILDSFDPLVA 289
45 of 71	18	279 VILDSFDPLVAEEDEREV 296
46 of 71	18	286 PLVAEEDEREVSVPAEIL 303
47 of 71	18	293 EREVSVPAEILRKSRRFA 310
48 of 71	18	300 AEILRKSRRFARALPVWA 317
49 of 71	15	307 RRFARALPVWARPDY 321
50 of 71	16	311 RALPVWARPDYNPPLV 326
51 of 71	16	316 WARP DYNPPLVETWKK 331
52 of 71	18	321 YNPPLVETWKKPDYEPV 338
53 of 71	17	328 TWKKPDYEPV VHGCP L 344
54 of 71	15	334 YEPPV VHGCP LPPPR 348
55 of 71	15	338 VVHGCP LPPPRSPPV 352
56 of 71	18	342 CPLPPRSPPVPPRKKR 359
57 of 71	15	349 SPPVPPRKKRTVVL 363
58 of 71	16	353 PPRKKRTVVLTESTL 368
59 of 71	18	358 KRTVVLTESTLSTALAE L 375
60 of 71	16	365 ESTLSTALAE LATS F 380
61 of 71	19	370 TALAELATKSF GSSSTSGI 388
62 of 71	18	378 KSF GSSSTSGITGDNTT T 395
63 of 71	16	385 TSGITGDNTTTSSEPA 400
64 of 71	18	390 GDNTTTSSEPAPSGCPPD 407
65 of 71	17	397 SEPAPSGCPPDSDVESY 413
66 of 71	17	403 GCPPDSDVESYSSMPPL 419

Table 1		
Peptide	Length	Sequence
67 of 71	18	409 DVESYSSMPPLEGE PGDP 426
68 of 71	18	416 MPPLEGE PGDPDLSDGSW 433
69 of 71	18	423 PGDPDLSDGSWSTVSSGA 440
70 of 71	17	430 DGSWSTVSSGADTEDVV 446
71 of 71	13	436 VSSGADTEDVVCC 448

Table 2		
Peptide	Solubility	Solvent
1 of 71	1 mg/mL	70% acetonitrile in water
2 of 71	1 mg/mL	50% acetic acid in water
3 of 71	1 mg/mL	70% acetonitrile in water
4 of 71	1 mg/mL	Water
5 of 71	1 mg/mL	Water
6 of 71	1 mg/mL	Water
7 of 71	1 mg/mL	50% acetic acid in water
8 of 71	1 mg/mL	Water
9 of 71	1 mg/mL	50% acetic acid in water
10 of 71	1 mg/mL	Water
11 of 71	1 mg/mL	Water
12 of 71	1 mg/mL	Water
13 of 71	1 mg/mL	Water
14 of 71	1 mg/mL	70% acetonitrile in water
15 of 71	1 mg/mL	70% acetonitrile in water
16 of 71	1 mg/mL	Water
17 of 71	1 mg/mL	70% acetonitrile in water
18 of 71	1 mg/mL	70% acetonitrile in water
19 of 71	1 mg/mL	50% acetic acid in water
20 of 71	1 mg/mL	50% acetic acid in water
21 of 71	1 mg/mL	50% acetic acid in water
22 of 71	1 mg/mL	50% acetic acid in water
23 of 71	1 mg/mL	50% acetic acid in water
24 of 71	1 mg/mL	50% acetic acid in water
25 of 71	1 mg/mL	50% acetic acid in water
26 of 71	1 mg/mL	50% acetic acid in water
27 of 71	1 mg/mL	50% acetic acid in water
28 of 71	1 mg/mL	50% acetic acid in water
29 of 71	1 mg/mL	Water
30 of 71	1 mg/mL	70% acetonitrile in water

Table 2		
Peptide	Solubility	Solvent
31 of 71	1 mg/mL	50% acetic acid in water
32 of 71	1 mg/mL	Water
33 of 71	1 mg/mL	Water
34 of 71	1 mg/mL	Water
35 of 71	1 mg/mL	70% acetonitrile in water
36 of 71	1 mg/mL	50% acetic acid in water
37 of 71	1 mg/mL	50% acetic acid in water
38 of 71	1 mg/mL	50% acetic acid in water
39 of 71	1 mg/mL	70% acetonitrile in water
40 of 71	1 mg/mL	70% acetonitrile in water
41 of 71	1 mg/mL	50% acetic acid in water
42 of 71	1 mg/mL	50% acetic acid in water
43 of 71	1 mg/mL	100% DMSO
44 of 71	1 mg/mL	100% DMSO
45 of 71	1 mg/mL	70% acetonitrile in water
46 of 71	1 mg/mL	Water
47 of 71	1 mg/mL	50% acetic acid in water
48 of 71	1 mg/mL	70% acetonitrile in water
49 of 71	1 mg/mL	Water
50 of 71	1 mg/mL	50% acetic acid in water
51 of 71	1 mg/mL	Water
52 of 71	1 mg/mL	Water
53 of 71	1 mg/mL	50% acetic acid in water
54 of 71	1 mg/mL	Water
55 of 71	1 mg/mL	Water
56 of 71	1 mg/mL	Water
57 of 71	1 mg/mL	Water
58 of 71	1 mg/mL	50% acetic acid in water
59 of 71	1 mg/mL	50% acetic acid in water
60 of 71	1 mg/mL	70% acetonitrile in water
61 of 71	1 mg/mL	100% DMSO
62 of 71	1 mg/mL	70% acetonitrile in water
63 of 71	1 mg/mL	Water
64 of 71	1 mg/mL	Water
65 of 71	1 mg/mL	Water
66 of 71	1 mg/mL	50% acetic acid in water
67 of 71	1 mg/mL	70% acetonitrile in water
68 of 71	1 mg/mL	50% acetic acid in water
69 of 71	1 mg/mL	50% acetic acid in water
70 of 71	1 mg/mL	50% acetic acid in water
71 of 71	1 mg/mL	100% DMSO