Peptide Array, Hepatitis C Virus, J4, NS5A Protein

Catalog No. NR-3745

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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, J4 (genotype 1b; GenPept: AAC15722).[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, J4, NS5A Protein, NR-3745."

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 of a Chimeric cDNA Clone of Hepatitis C Virus Genotype 1b Are Infectious *in Vivo*." Virology 244 (1998): 161-172. PubMed: 9581788. GenPept: AAC15722.

Support Provided by NIAID

Table 1

Peptide	Length	Sequence
1 of 71	16	1 SGSWLRDVWDWICTVL 16
2 of 71	18	6 RDVWDWICTVLTDFKTWL 23
3 of 71	18	13 CTVLTDFKTWLQSKLLPR 30
4 of 71	18	20 KTWLQSKLLPRLPGVPFL 37
5 of 71	18	27 LLPRLPGVPFLSCQRGYK 44
6 of 71	15	34 VPFLSCQRGYKGVWR 48
7 of 71	16	38 SCQRGYKGVWRGDGIM 53
8 of 71	19	43 YKGVWRGDGIMQTTCPCGA 61
9 of 71	18	51 GIMQTTCPCGAQIAGHVK 68
10 of 71	18	58 PCGAQIAGHVKNGSMRIV 75
11 of 71	18	65 GHVKNGSMRIVGPRTCSN 82
12 of 71	17	72 MRIVGPRTCSNTWHGTF 88
13 of 71	16	78 RTCSNTWHGTFPINAY 93
14 of 71	18	83 TWHGTFPINAYTTGPCTP 100
15 of 71	17	90 INAYTTGPCTPSPAPNY 106
16 of 71	18	96 GPCTPSPAPNYSRALWRV 113
17 of 71	17	103 APNYSRALWRVAAEEYV 119
18 of 71	16	109 ALWRVAAEEYVEVTRV 124
19 of 71	17	114 AAEEYVEVTRVGDFHYV 130
20 of 71	19	120 EVTRVGDFHYVTGMTTDNV 138
21 of 71	17	128 HYVTGMTTDNVKCPCQV 144
22 of 71	17	134 TTDNVKCPCQVPAPEFF 150
23 of 71	18	140 CPCQVPAPEFFTEVDGVR 157
24 of 71	18	147 PEFFTEVDGVRLHRYAPA 164
25 of 71	17	154 DGVRLHRYAPACKPLLR 170
26 of 71	18	160 RYAPACKPLLREDVTFQV 177
27 of 71	18	167 PLLREDVTFQVGLNQYLV 184
28 of 71	15	174 TFQVGLNQYLVGSQL 188

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Table 1		
Peptide	**Length**	**Sequence**
29 of 71	19	178 GLNQYLVGSQLPCEPEPDV 196
30 of 71	18	186 SQLPCEPEPDVTVLTSML 203
31 of 71	17	193 EPDVTVLTSMLTDPSHI 209
32 of 71	18	199 LTSMLTDPSHITAETAKR 216
33 of 71	15	206 PSHITAETAKRRLAR 220
34 of 71	18	210 TAETAKRRLARGSPPSLA 227
35 of 71	18	217 RLARGSPPSLASSSASQL 234
36 of 71	18	224 PSLASSSASQLSAPSLKA 241
37 of 71	17	231 ASQLSAPSLKATCTTHH 247
38 of 71	18	237 PSLKATCTTHHDSPDADL 254
39 of 71	18	244 TTHHDSPDADLIEANLLW 261
40 of 71	15	251 DADLIEANLLWRQEM 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 SENKVVILDSFEPLHA 289
45 of 71	18	279 VILDSFEPLHAEGDEREI 296
46 of 71	18	286 PLHAEGDEREISVAAEIL 303
47 of 71	17	293 EREISVAAEILRKSRKF 309
48 of 71	18	299 AAEILRKSRKFPSALPIW 316
49 of 71	16	306 SRKFPSALPIWARPDY 321
50 of 71	16	311 SALPIWARPDYNPPLL 326
51 of 71	15	316 WARPDYNPPLLESWK 330
52 of 71	16	320 DYNPPLLESWKDPDYV 335
53 of 71	16	325 LLESWKDPDYVPPVVH 340
54 of 71	15	330 KDPDYVPPVVHGCPL 344
55 of 71	16	334 YVPPVVHGCPLPPTKA 349
56 of 71	18	339 VHGCPLPPTKAPPIPPPR 356
57 of 71	18	346 PTKAPPIPPPRRKRTVVL 363
58 of 71	16	353 PPPRRKRTVVLTESNV 368
59 of 71	18	358 KRTVVLTESNVSSALAEL 375
60 of 71	16	365 ESNVSSALAELATKTF 380
61 of 71	18	370 SALAELATKTFGSSGSSA 387
62 of 71	17	377 TKTFGSSGSSAVDSGTA 393
63 of 71	18	383 SGSSAVDSGTATALPDLA 400
64 of 71	17	390 SGTATALPDLASDDGDK 406
65 of 71	18	396 LPDLASDDGDKGSDVESY 413
66 of 71	17	403 DGDKGSDVESYSSMPPL 419
67 of 71	18	409 DVESYSSMPPLEGEPGDP 426
68 of 71	18	416 MPPLEGEPGDPDLSDGSW 433
69 of 71	18	423 PGDPDLSDGSWSTVSEEA 440
70 of 71	16	430 DGSWSTVSEEASEDVV 445
71 of 71	13	435 TVSEEASEDVVCC 447

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Table 2		
Peptide	**Solubility**	**Solvent**
1 of 71	1 mg/mL	50% acetic acid in water
2 of 71	1 mg/mL	50% acetic acid in water
3 of 71	1 mg/mL	50% acetic acid in water
4 of 71	1 mg/mL	50% acetic acid in water
5 of 71	1 mg/mL	Water
6 of 71	1 mg/mL	50% acetic acid in water
7 of 71	1 mg/mL	50% acetic acid in water
8 of 71	1 mg/mL	50% acetic acid in water
9 of 71	1 mg/mL	Water
10 of 71	1 mg/mL	50% acetic acid in water
11 of 71	1 mg/mL	50% acetic acid in water
12 of 71	1 mg/mL	50% acetic acid in water
13 of 71	1 mg/mL	50% acetic acid in water
14 of 71	1 mg/mL	50% acetic acid in water
15 of 71	1 mg/mL	50% acetic acid in water
16 of 71	1 mg/mL	50% acetic acid in water
17 of 71	1 mg/mL	50% acetic acid in water
18 of 71	1 mg/mL	50% acetic acid 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	70% acetonitrile in water
26 of 71	1 mg/mL	70% acetonitrile 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	50% acetic acid in water
30 of 71	1 mg/mL	50% acetic acid in water
31 of 71	1 mg/mL	50% acetic acid in water
32 of 71	1 mg/mL	50% acetic acid in water
33 of 71	1 mg/mL	50% acetic acid in water
34 of 71	1 mg/mL	50% acetic acid in water
35 of 71	1 mg/mL	50% acetic acid in water
36 of 71	1 mg/mL	50% acetic acid in water
37 of 71	1 mg/mL	Water
38 of 71	1 mg/mL	50% acetic acid in water
39 of 71	1 mg/mL	50% acetic acid in water

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Table 2		
Peptide	**Solubility**	**Solvent**
40 of 71	1 mg/mL	50% acetic acid 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	50% acetic acid in water
44 of 71	1 mg/mL	50% acetic acid in water
45 of 71	1 mg/mL	50% acetic acid in water
46 of 71	1 mg/mL	50% acetic acid in water
47 of 71	1 mg/mL	50% acetic acid in water
48 of 71	1 mg/mL	50% acetic acid in water
49 of 71	1 mg/mL	50% acetic acid in water
50 of 71	1 mg/mL	50% acetic acid in water
51 of 71	1 mg/mL	50% acetic acid in water
52 of 71	1 mg/mL	50% acetic acid in water
53 of 71	1 mg/mL	50% acetic acid in water
54 of 71	1 mg/mL	50% acetic acid in water
55 of 71	1 mg/mL	50% acetic acid in water
56 of 71	1 mg/mL	50% acetic acid in water
57 of 71	1 mg/mL	50% acetic acid in 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	50% acetic acid in water
61 of 71	1 mg/mL	50% acetic acid in water
62 of 71	1 mg/mL	50% acetic acid in water
63 of 71	1 mg/mL	50% acetic acid in water
64 of 71	1 mg/mL	70% acetonitrile in water
65 of 71	1 mg/mL	50% acetic acid in water
66 of 71	1 mg/mL	50% acetic acid in water
67 of 71	1 mg/mL	50% acetic acid 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	100% DMSO
71 of 71	1 mg/mL	100% DMSO