Peptide Array, Hepatitis C Virus, J4, E2 Protein

Catalog No. NR-3739

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Contributor:
BEI Resources

Manufacturer:
Bio-Synthesis, Inc.

Product Description:
The 55-peptide array spans the E2 protein of hepatitis C virus, J4 (genotype 1b; GenPept: AAC15722).[1] Peptides are 15- to 19-mers, with 11 or 12 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, E2 Protein, NR-3739."

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 55	16	1 ETHTTGRVAGHTTSGF 16
2 of 55	15	6 GRVAGHTTSGFTSLF 20
3 of 55	18	10 GHTTSGFTSLFSSGASQK 27
4 of 55	15	17 TSLFSSGASQKIQLV 31
5 of 55	18	21 SSGASQKIQLVNTNGSWH 38
6 of 55	17	28 IQLVNTNGSWHINRTAL 44
7 of 55	17	34 NGSWHINRTALNCNDSL 50
8 of 55	18	40 NRTALNCNDSLQTGFFAA 57
9 of 55	18	47 NDSLQTGFFAALFYAHKF 64
10 of 55	19	54 FFAALFYAHKFNSSGCPER 72
11 of 55	18	62 HKFNSSGCPERMASCRPI 79
12 of 55	18	69 CPERMASCRPIDWFAQGW 86
13 of 55	18	76 CRPIDWFAQGWGPITYTK 93
14 of 55	18	83 AQGWGPITYTKPNSSDQR 100
15 of 55	18	90 TYTKPNSSDQRPYCWHYA 107
16 of 55	18	97 SDQRPYCWHYAPRPCGVV 114
17 of 55	16	104 WHYAPRPCGVVPASQV 119
18 of 55	18	109 RPCGVVPASQVCGPVYCF 126
19 of 55	18	116 ASQVCGPVYCFTPSPVVV 133
20 of 55	16	123 VYCFTPSPVVVGTTDR 138
21 of 55	17	128 PSPVVVGTTDRSGVPTY 144
22 of 55	18	134 GTTDRSGVPTYSWGENET 151
23 of 55	16	141 VPTYSWGENETDVMLL 156
24 of 55	15	146 WGENETDVMLLNNTR 160
25 of 55	18	150 ETDVMLLNNTRPPQGNWF 167
26 of 55	16	157 NNTRPPQGNWFGCTWM 172
27 of 55	18	162 PQGNWFGCTWMNSTGFTK 179
28 of 55	18	169 CTWMNSTGFTKTCGGPPC 186
29 of 55	16	176 GFTKTCGGPPCNIGGV 191
30 of 55	17	181 CGGPPCNIGGVGNRTLI 197
31 of 55	18	187 NIGGVGNRTLICPTDCFR 204
32 of 55	18	194 RTLICPTDCFRKHPEATY 211

Table 1		
Peptide	**Length**	**Sequence**
33 of 55	19	201 DCFRKHPEATYTKCGSGPW 219
34 of 55	18	209 ATYTKCGSGPWLTPRCLV 226
35 of 55	18	216 SGPWLTPRCLVDYPYRLW 233
36 of 55	17	223 RCLVDYPYRLWHYPCTL 239
37 of 55	18	229 PYRLWHYPCTLNFSIFKV 246
38 of 55	18	236 PCTLNFSIFKVRMYVGGV 253
39 of 55	18	243 IFKVRMYVGGVEHRLNAA 260
40 of 55	16	250 VGGVEHRLNAACNWTR 265
41 of 55	17	255 HRLNAACNWTRGERCNL 271
42 of 55	16	261 CNWTRGERCNLEDRDR 276
43 of 55	18	266 GERCNLEDRDRSELSPLL 283
44 of 55	17	273 DRDRSELSPLLLSTTEW 289
45 of 55	18	279 LSPLLLSTTEWQILPCAF 296
46 of 55	17	286 TTEWQILPCAFTTLPAL 302
47 of 55	18	292 LPCAFTTLPALSTGLIHL 309
48 of 55	18	299 LPALSTGLIHLHQNIVDV 316
49 of 55	17	306 LIHLHQNIVDVQYLYGV 322
50 of 55	18	312 NIVDVQYLYGVGSAFVSF 329
51 of 55	18	319 LYGVGSAFVSFAIKWEYI 336
52 of 55	18	326 FVSFAIKWEYILLLFLLL 343
53 of 55	18	333 WEYILLLFLLLADARVCA 350
54 of 55	18	340 FLLLADARVCACLWMMLL 357
55 of 55	17	347 RVCACLWMMLLIAQAEA 363

Table 2		
Peptide	**Solubility**	**Solvent**
1 of 55	1 mg/mL	100% DMSO
2 of 55	1 mg/mL	100% DMSO
3 of 55	1 mg/mL	100% DMSO
4 of 55	1 mg/mL	100% DMSO
5 of 55	1 mg/mL	0.05% trifluoroacetic acid in water
6 of 55	1 mg/mL	100% DMSO
7 of 55	1 mg/mL	100% DMSO
8 of 55	1 mg/mL	100% DMSO
9 of 55	1 mg/mL	100% DMSO
10 of 55	1 mg/mL	70% acetonitrile in water
11 of 55	1 mg/mL	0.05% trifluoroacetic acid in water
12 of 55	1 mg/mL	100% DMSO
13 of 55	1 mg/mL	0.05% trifluoroacetic acid in water

Table 2		
Peptide	**Solubility**	**Solvent**
14 of 55	1 mg/mL	70% acetonitrile in water
15 of 55	1 mg/mL	0.05% trifluoroacetic acid in water
16 of 55	1 mg/mL	100% DMSO
17 of 55	1 mg/mL	50% acetic acid in water
18 of 55	1 mg/mL	0.05% trifluoroacetic acid in water
19 of 55	1 mg/mL	70% acetonitrile in water
20 of 55	1 mg/mL	50% acetic acid in water
21 of 55	1 mg/mL	70% acetonitrile in water
22 of 55	1 mg/mL	70% acetonitrile in water
23 of 55	1 mg/mL	100% DMSO
24 of 55	1 mg/mL	100% DMSO
25 of 55	1 mg/mL	100% DMSO
26 of 55	1 mg/mL	70% acetonitrile in water
27 of 55	1 mg/mL	100% DMSO
28 of 55	1 mg/mL	70% acetonitrile in water
29 of 55	1 mg/mL	70% acetonitrile in water
30 of 55	1 mg/mL	0.05% trifluoroacetic acid in water
31 of 55	1 mg/mL	0.05% trifluoroacetic acid in water
32 of 55	1 mg/mL	0.05% trifluoroacetic acid in water
33 of 55	1 mg/mL	100% DMSO
34 of 55	1 mg/mL	50% acetic acid in water
35 of 55	1 mg/mL	0.05% trifluoroacetic acid in water
36 of 55	1 mg/mL	0.05% trifluoroacetic acid in water
37 of 55	1 mg/mL	100% DMSO
38 of 55	1 mg/mL	100% DMSO
39 of 55	1 mg/mL	100% DMSO
40 of 55	1 mg/mL	100% DMSO
41 of 55	1 mg/mL	50% acetic acid in water
42 of 55	1 mg/mL	0.05% trifluoroacetic acid in water
43 of 55	1 mg/mL	50% acetic acid in water
44 of 55	1 mg/mL	0.05% trifluoroacetic acid in water
45 of 55	1 mg/mL	100% DMSO
46 of 55	1 mg/mL	70% acetonitrile in water
47 of 55	1 mg/mL	100% DMSO
48 of 55	1 mg/mL	100% DMSO
49 of 55	1 mg/mL	100% DMSO
50 of 55	1 mg/mL	100% DMSO
51 of 55	1 mg/mL	100% DMSO
52 of 55	1 mg/mL	100% DMSO
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