Peptide Array, Hepatitis C Virus, J4, NS4B Protein

Catalog No. NR-3744

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Contributor:
BEI Resources

Manufacturer:
Bio-Synthesis, Inc.

Product Description:
The 40-peptide array spans the NS4B protein of hepatitis C virus, J4 (genotype 1b; GenPept: AAC15722).[1] Peptides are 12- to 18-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, NS4B Protein, NR-3744."

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 40	18	1 ASQLPYIEQGMQLAEQFK 18
2 of 40	18	8 EQGMQLAEQFKQKALGLL 25
3 of 40	18	15 EQFKQKALGLLQTATKQA 32
4 of 40	18	22 LGLLQTATKQAEAAAPVV 39
5 of 40	18	29 TKQAEAAAPVVESKWRAL 46
6 of 40	18	36 APVVESKWRALETFWAKH 53
7 of 40	16	43 WRALETFWAKHMWNFI 58
8 of 40	18	48 TFWAKHMWNFISGIQYLA 65
9 of 40	16	55 WNFISGIQYLAGLSTL 70
10 of 40	18	60 GIQYLAGLSTLPGNPAIA 77
11 of 40	18	67 LSTLPGNPAIASLMAFTA 84
12 of 40	17	74 PAIASLMAFTASITSPL 90
13 of 40	18	80 MAFTASITSPLTTQNTLL 97
14 of 40	18	87 TSPLTTQNTLLFNILGGW 104
15 of 40	17	94 NTLLFNILGGWVAAQLA 110
16 of 40	18	100 ILGGWVAAQLAPPSAASA 117
17 of 40	18	107 AQLAPPSAASAFVGAGIA 124
18 of 40	18	114 AASAFVGAGIAGAAVGSI 131
19 of 40	18	121 AGIAGAAVGSIGLGKVLV 138
20 of 40	17	128 VGSIGLGKVLVDILAGY 144
21 of 40	18	134 GKVLVDILAGYGAGVAGA 151
22 of 40	18	141 LAGYGAGVAGALVAFKVM 158
23 of 40	15	148 VAGALVAFKVMSGEV 162
24 of 40	18	152 LVAFKVMSGEVPSTEDLV 169
25 of 40	18	159 SGEVPSTEDLVNLLPAIL 176
26 of 40	18	166 EDLVNLLPAILSPGALVV 183
27 of 40	18	173 PAILSPGALVVGVVCAAI 190
28 of 40	16	180 ALVVGVVCAAILRRHV 195

Table 1		
Peptide	**Length**	**Sequence**
29 of 40	18	185 VVCAAILRRHVGPGEGAV 202
30 of 40	18	192 RRHVGPGEGAVQWMNRLI 209
31 of 40	16	199 EGAVQWMNRLIAFASR 214
32 of 40	15	204 WMNRLIAFASRGNHV 218
33 of 40	17	208 LIAFASRGNHVSPTHYV 224
34 of 40	18	214 RGNHVSPTHYVPESDAAA 231
35 of 40	17	221 THYVPESDAAARVTQIL 237
36 of 40	16	227 SDAAARVTQILSSLTI 242
37 of 40	18	232 RVTQILSSLTITQLLKRL 249
38 of 40	15	239 SLTITQLLKRLHQWI 253
39 of 40	18	243 TQLLKRLHQWINEDCSTP 260
40 of 40	12	250 HQWINEDCSTPC 261

Table 2		
Peptide	**Solubility**	**Solvent**
1 of 40	1 mg/mL	6 M guanidine-HCl
2 of 40	1 mg/mL	6 M guanidine-HCl
3 of 40	1 mg/mL	6 M guanidine-HCl
4 of 40	1 mg/mL	6 M guanidine-HCl
5 of 40	1 mg/mL	6 M guanidine-HCl
6 of 40	1 mg/mL	100% DMSO
7 of 40	1 mg/mL	100% DMSO
8 of 40	1 mg/mL	6 M guanidine-HCl
9 of 40	1 mg/mL	100% DMSO
10 of 40	1 mg/mL	100% DMSO
11 of 40	1 mg/mL	100% DMSO
12 of 40	1 mg/mL	100% DMSO
13 of 40	1 mg/mL	6 M guanidine-HCl
14 of 40	1 mg/mL	100% DMSO
15 of 40	1 mg/mL	100% DMSO
16 of 40	1 mg/mL	6 M guanidine-HCl
17 of 40	1 mg/mL	100% DMSO
18 of 40	1 mg/mL	100% DMSO
19 of 40	1 mg/mL	100% DMSO
20 of 40	1 mg/mL	100% DMSO
21 of 40	1 mg/mL	100% DMSO
22 of 40	1 mg/mL	100% DMSO
23 of 40	1 mg/mL	100% DMSO

Table 2		
Peptide	**Solubility**	**Solvent**
24 of 40	1 mg/mL	100% DMSO
25 of 40	1 mg/mL	6 M guanidine-HCl
26 of 40	1 mg/mL	6 M guanidine-HCl
27 of 40	1 mg/mL	100% DMSO
28 of 40	1 mg/mL	100% DMSO
29 of 40	1 mg/mL	100% DMSO
30 of 40	1 mg/mL	6 M guanidine-HCl
31 of 40	1 mg/mL	100% DMSO
32 of 40	1 mg/mL	100% DMSO
33 of 40	1 mg/mL	6 M guanidine-HCl
34 of 40	1 mg/mL	100% DMSO
35 of 40	1 mg/mL	100% DMSO
36 of 40	1 mg/mL	100% DMSO
37 of 40	1 mg/mL	100% DMSO
38 of 40	1 mg/mL	100% DMSO
39 of 40	1 mg/mL	6 M guanidine-HCl
40 of 40	1 mg/mL	70% acetonitrile in water