

Product Information Sheet for NR-3738

Peptide Array, Hepatitis C Virus, J4, E1 Protein

Catalog No. NR-3738

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Contributor:

BEI Resources

Manufacturer:

Bio-Synthesis, Inc.

Product Description:

The 28-peptide array spans the E1 protein of hepatitis C virus, J4 (genotype 1b; GenPept: AAC15722).¹ Peptides are 16- 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, E1 Protein, NR-3738."

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.

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Table 1		
Peptide	Length	Sequence
1 of 28	18	1 YEVRNVSGIYHVTNDCSN 18
2 of 28	18	8 GIYHVTNDCSNSSIVYEA 25
3 of 28	17	15 DCSNSSIVYEAADVIMH 31
4 of 28	16	21 IVYEAADVIMHTPGCV 36
5 of 28	18	26 ADVIMHTPGCVPCVQEGN 43
6 of 28	18	33 PGCVPVCVQEGNSSRCWVA 50
7 of 28	18	39 VQEGNSSRCWVALTPTLA 56
8 of 28	17	46 RCWVALTPTLAARNASV 62
9 of 28	18	52 TPTLAARNASVPTTTIRR 69
10 of 28	17	59 NASVPTTTIRRHVDLLV 75
11 of 28	16	65 TTIRRHVDLLVGTAAF 80
12 of 28	17	70 HVDLLVGTAAFCSAMYV 86
13 of 28	18	76 GTAAFCSAMYVGDLCGSI 93
14 of 28	18	83 AMYVGDLCGSIFLVSQLF 100
15 of 28	18	90 CGSIFLVSQLFTFSPRRH 107
16 of 28	18	97 SQLFTFSPRRHETVQDCN 114
17 of 28	18	104 PRRHETVQDCNCSIYPGH 121
18 of 28	18	110 VQDCNCSIYPGHVSGHRM 127
19 of 28	17	117 IYPGHVSGHRMAWDMMM 133
20 of 28	18	123 SGHRMAWDMMMNVSPPTA 140
21 of 28	18	130 DMMMNWSPPTALVVSQLL 147
22 of 28	18	137 PTTALVVSQLLRIPQAVV 154
23 of 28	18	144 SQLLRIPQAVVDMVAGAH 161
24 of 28	17	150 PQAVVDMVAGAHWGVLA 166
25 of 28	18	156 MVAGAHWGVLAGLAYYSM 173
26 of 28	18	163 GVLAGLAYYSMVGNWAKV 180
27 of 28	18	170 YYSMVGNWAKVLIVALLF 187
28 of 28	16	177 WAKVLIVALLFAGVDG 192

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Table 2		
Peptide	Solubility	Solvent
1 of 28	1 mg/mL	100% DMSO
2 of 28	1 mg/mL	100% DMSO
3 of 28	1 mg/mL	100% DMSO
4 of 28	1 mg/mL	70% acetonitrile in water
5 of 28	1 mg/mL	70% acetonitrile in water
6 of 28	1 mg/mL	100% DMSO
7 of 28	1 mg/mL	70% acetonitrile in water
8 of 28	1 mg/mL	70% acetonitrile in water
9 of 28	1 mg/mL	70% acetonitrile in water
10 of 28	1 mg/mL	0.05% trifluoroacetic acid in water
11 of 28	1 mg/mL	100% DMSO
12 of 28	1 mg/mL	100% DMSO
13 of 28	1 mg/mL	100% DMSO
14 of 28	1 mg/mL	100% DMSO
15 of 28	1 mg/mL	100% DMSO
16 of 28	1 mg/mL	100% DMSO
17 of 28	1 mg/mL	50% acetic acid in water
18 of 28	1 mg/mL	0.05% trifluoroacetic acid in water
19 of 28	1 mg/mL	0.05% trifluoroacetic acid in water
20 of 28	1 mg/mL	100% DMSO
21 of 28	1 mg/mL	50% acetic acid in water
22 of 28	1 mg/mL	0.05% trifluoroacetic acid in water
23 of 28	1 mg/mL	0.05% trifluoroacetic acid in water
24 of 28	1 mg/mL	100% DMSO
25 of 28	1 mg/mL	100% DMSO
26 of 28	1 mg/mL	100% DMSO
27 of 28	1 mg/mL	100% DMSO
28 of 28	1 mg/mL	100% DMSO