

## Peptide Array, Hepatitis C Virus, H77, NS2 Protein

### Catalog No. NR-3751

This reagent is the tangible property of the U.S. Government.

### For research use only. Not for human use.

#### Contributor:

NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH

#### Manufacturer:

Bio-Synthesis, Inc.

#### Product Description:

The 32-peptide array spans the NS2 protein of hepatitis C virus, H77 (genotype 1a; GenPept: AAB67036).<sup>1</sup> Peptides are 13- 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 desiccants 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 the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: Peptide Array, Hepatitis C Virus, H77, NS2 Protein, NR-3751."

#### 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](http://www.cdc.gov/od/ohs/biosfty/bmbl5/bmbl5toc.htm).

#### Disclaimers:

You are authorized to use this product for research use only. It is not intended for human use.

Use of this product is subject to the terms and conditions of the BEI Resources Material Transfer Agreement (MTA). The MTA is available on our Web site at [www.beiresources.org](http://www.beiresources.org).

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet, neither ATCC® nor the U.S. Government make any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither ATCC® nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC® and the U.S. Government are not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC®, their suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.

**Use Restrictions:**

**This material is distributed for internal research, non-commercial purposes only.** This material, its product or its derivatives may not be distributed to third parties. Except as performed under a U.S. Government contract, individuals contemplating commercial use of the material, its products or its derivatives must contact the contributor to determine if a license is required. U.S. Government contractors may need a license before first commercial sale. This material may be subject to third party patent rights.

**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.

ATCC® is a trademark of the American Type Culture Collection.



Table 1		
Peptide	Length	Sequence
1 of 32	18	1 LDTEVAASCGGVVLVGLM 18
2 of 32	18	8 SCGGVVLVGLMALTSPY 25
3 of 32	18	15 VGLMALTSPYYKRYISW 32
4 of 32	18	22 LSPYYKRYISWCMWWLQY 39
5 of 32	18	29 YISWCMWWLQYFLTRVEA 46
6 of 32	17	36 WLQYFLTRVEAQLHVWV 52
7 of 32	17	42 TRVEAQLHVWVPLNVR 58
8 of 32	18	48 LHVWVPLNVRGGRDAVI 65
9 of 32	18	55 LNVRGGRDAVILLMCVVH 72
10 of 32	18	62 DAVILLMCVVHPTLVFDI 79
11 of 32	18	69 CVVHPTLVFDITKLLAI 86
12 of 32	18	76 VFDITKLLAIFGPLWIL 93
13 of 32	18	83 LLAIFGPLWILQASLLKV 100
14 of 32	17	90 LWILQASLLKVPYFVRV 106
15 of 32	17	96 SLLKVPYFVRVQGLLRI 112
16 of 32	18	102 YFVRVQGLLRICALARKI 119
17 of 32	17	109 LLRICALARKIAGGHYV 125
18 of 32	18	115 LARKIAGGHYVQMAIIKL 132
19 of 32	18	122 GHYVQMAIIKLGALTGTY 139
20 of 32	16	129 IIKLGALTGTYYVYNHL 144
21 of 32	18	134 ALTGTYYVYNHLTPLRDWA 151
22 of 32	18	141 YNHLTPLRDWAHNGLRDL 158
23 of 32	18	148 RDWAHNGLRDLAVAVEPV 165
24 of 32	16	155 LRD LAVAVEPVVFSRM 170
25 of 32	18	160 VAVEPVVFSRMETKLITW 177
26 of 32	17	167 FSRMETKLITWGADTAA 183
27 of 32	16	173 KLITWGADTAACGDII 188
28 of 32	18	178 GADTAACGDIINGLPVSA 195
29 of 32	18	185 GDIINGLPVSARRGQEIL 202
30 of 32	18	192 PVSARRGQEILLGPADGM 209
31 of 32	18	198 GQEILLGPADGMVSKGWR 215
32 of 32	13	205 PADGMVSKGWRL 217

Table 2		
Peptide	Solubility	Solvent
1 of 32	1 mg/mL	100% DMSO
2 of 32	1 mg/mL	100% DMSO
3 of 32	1 mg/mL	100% DMSO
4 of 32	1 mg/mL	100% DMSO
5 of 32	1 mg/mL	100% DMSO
6 of 32	1 mg/mL	100% DMSO
7 of 32	1 mg/mL	100% DMSO
8 of 32	1 mg/mL	100% DMSO
9 of 32	1 mg/mL	100% DMSO
10 of 32	1 mg/mL	100% DMSO
11 of 32	1 mg/mL	100% DMSO
12 of 32	1 mg/mL	100% DMSO
13 of 32	1 mg/mL	100% DMSO
14 of 32	1 mg/mL	100% DMSO
15 of 32	1 mg/mL	100% DMSO
16 of 32	1 mg/mL	100% DMSO
17 of 32	1 mg/mL	70% acetonitrile in water
18 of 32	1 mg/mL	70% acetonitrile in water
19 of 32	1 mg/mL	100% DMSO
20 of 32	1 mg/mL	100% DMSO
21 of 32	1 mg/mL	70% acetonitrile in water
22 of 32	1 mg/mL	70% acetonitrile in water
23 of 32	1 mg/mL	70% acetonitrile in water
24 of 32	1 mg/mL	70% acetonitrile in water
25 of 32	1 mg/mL	100% DMSO
26 of 32	1 mg/mL	100% DMSO
27 of 32	1 mg/mL	100% DMSO
28 of 32	1 mg/mL	100% DMSO
29 of 32	1 mg/mL	6 M guanidine-HCl
30 of 32	1 mg/mL	6 M guanidine-HCl
31 of 32	1 mg/mL	70% acetonitrile in water
32 of 32	1 mg/mL	70% acetonitrile in water