Product Information Sheet for NR-4070

Peptide Array, Hepatitis C Virus, K3a/650, NS5b Protein

Catalog No. NR-4070

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Contributor:
BEI Resources

Manufacturer:
Bio-Synthesis, Inc.

Product Description:
The 90-peptide array spans the NS5b protein of hepatitis C virus, K3a/650 (genotype 3a; GenPept: BAA06044).[1] Peptides are 14- 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, K3a/650, NS5b Protein, NR-4070."

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. Yamada, N., et al. "Full-Length Sequence of the Genome of Hepatitis C Virus Type 3a: Comparative Study with Different Genotypes." J. Gen. Virol. 75 (1994): 3279–3284. PubMed: 7964640. GenPept: BAA06044.

Support Provided by NIAID

Table 1

Peptide	Length	Sequence
1 of 90	16	1 SMSYSWTGALITPCSA 16
2 of 90	18	6 WTGALITPCSAEEEKLPI 23
3 of 90	18	13 PCSAEEEKLPISPLSNSL 30
4 of 90	18	20 KLPISPLSNSLLRHHNLV 37
5 of 90	17	27 SNSLLRHHNLVYSTSSR 43
6 of 90	18	33 HHNLVYSTSSRSASQRQK 50
7 of 90	18	40 TSSRSASQRQKKVTFDRL 57
8 of 90	18	46 SQRQKKVTFDRLQVLDDH 63
9 of 90	16	53 TFDRLQVLDDHYKTAL 68
10 of 90	18	57 LQVLDDHYKTALQEVKER 74
11 of 90	18	64 YKTALQEVKERASRVKAR 81
12 of 90	18	71 VKERASRVKARMLSIEEA 88
13 of 90	18	78 VKARMLSIEEACALVPPH 95
14 of 90	17	85 IEEACALVPPHSARSKF 101
15 of 90	18	91 LVPPHSARSKFGYSAKDV 108
16 of 90	18	98 RSKFGYSAKDVRSLSSKA 115
17 of 90	18	105 AKDVRSLSSKAINQIRSV 122
18 of 90	16	112 SSKAINQIRSVWEDLL 127
19 of 90	18	117 NQIRSVWEDLLEDTTTPI 134
20 of 90	18	124 EDLLEDTTTPIPTTIMAK 141
21 of 90	17	131 TTPIPTTIMAKNEVFCV 147
22 of 90	18	137 TIMAKNEVFCVDPAKGGR 154
23 of 90	18	144 VFCVDPAKGGRKAARLIV 161
24 of 90	18	151 KGGRKAARLIVYPDLGVR 168
25 of 90	18	158 RLIVYPDLGVRVCEKRAL 175
26 of 90	18	165 LGVRVCEKRALYDVIQRL 182
27 of 90	16	172 KRALYDVIQRLSIETM 187
28 of 90	17	177 DVIQRLSIETMGSAYGF 193
29 of 90	18	183 SIETMGSAYGFQYSPRQR 200

Table 1		
Peptide	**Length**	**Sequence**
30 of 90	18	190 AYGFQYSPRQRVERLLKM 207
31 of 90	16	197 PRQRVERLLKMWTSKK 212
32 of 90	18	202 ERLLKMWTSKKTPLGFSY 219
33 of 90	16	209 TSKKTPLGFSYDTRCF 224
34 of 90	15	214 PLGFSYDTRCFDSTV 228
35 of 90	18	218 SYDTRCFDSTVTGQDIRV 235
36 of 90	16	225 DSTVTGQDIRVEEAVY 240
37 of 90	16	230 GQDIRVEEAVYQCCNL 245
38 of 90	18	235 VEEAVYQCCNLEPEPGQA 252
39 of 90	18	242 CCNLEPEPGQAISSLTER 259
40 of 90	18	249 PGQAISSLTERLYCGGPM 266
41 of 90	17	256 LTERLYCGGPMNNSKGA 272
42 of 90	17	262 CGGPMNNSKGAQCGYLR 278
43 of 90	18	268 NSKGAQCGYLRCRASGVL 285
44 of 90	15	275 GYLRCRASGVLPTSF 289
45 of 90	18	279 CRASGVLPTSFGNTITCY 296
46 of 90	18	286 PTSFGNTITCYIKATAAA 303
47 of 90	17	293 ITCYIKATAAARAAGLR 309
48 of 90	17	299 ATAAARAAGLRNPDFLV 315
49 of 90	18	305 AAGLRNPDFLVCGDDLVV 322
50 of 90	18	312 DFLVCGDDLVVVAESDGV 329
51 of 90	18	319 DLVVVAESDGVDEDRATL 336
52 of 90	18	326 SDGVDEDRATLRAFTEAM 343
53 of 90	16	333 RATLRAFTEAMTRYSA 348
54 of 90	16	338 AFTEAMTRYSAPPGDA 353
55 of 90	18	343 MTRYSAPPGDAPQPTYDL 360
56 of 90	18	350 PGDAPQPTYDLELITSCS 367
57 of 90	18	357 TYDLELITSCSSNVSVAR 374
58 of 90	18	364 TSCSSNVSVARDDKGKRY 381
59 of 90	18	371 SVARDDKGKRYYYLTRDA 388
60 of 90	18	378 GKRYYYLTRDATTPLARA 395
61 of 90	18	385 TRDATTPLARAAWETARH 402
62 of 90	18	392 LARAAWETARHTPVNSWL 409
63 of 90	18	399 TARHTPVNSWLGSIIMYA 416
64 of 90	18	406 NSWLGSIIMYAPTIWVRM 423
65 of 90	18	413 IMYAPTIWVRMVMMTHFF 430
66 of 90	19	420 WVRMVMMTHFFSILQSQEI 438
67 of 90	18	428 HFFSILQSQEILDRPLDF 445
68 of 90	18	435 SQEILDRPLDFEMYGATY 452
69 of 90	18	442 PLDFEMYGATYSVTPLDL 459
70 of 90	18	449 GATYSVTPLDLPAIIERL 466

Table 1		
Peptide	**Length**	**Sequence**
71 of 90	17	456 PLDLPAIIERLHGLSAF 472
72 of 90	16	462 IIERLHGLSAFSVHSY 477
73 of 90	18	467 HGLSAFSVHSYSPVELNR 484
74 of 90	18	474 VHSYSPVELNRVAGTLRK 491
75 of 90	18	481 ELNRVAGTLRKLGCPPLR 498
76 of 90	18	488 TLRKLGCPPLRAWRHRAR 505
77 of 90	18	495 PPLRAWRHRARAVRAKLI 512
78 of 90	18	502 HRARAVRAKLIAQGGRAK 519
79 of 90	18	509 AKLIAQGGRAKICGLYLF 526
80 of 90	18	516 GRAKICGLYLFNWAVRTK 533
81 of 90	17	523 LYLFNWAVRTKTKLTPL 539
82 of 90	17	529 AVRTKTKLTPLPAAGQL 545
83 of 90	17	535 KLTPLPAAGQLDLSSWF 551
84 of 90	15	541 AAGQLDLSSWFTVGV 555
85 of 90	18	545 LDLSSWFTVGVGGNDIYH 562
86 of 90	17	552 TVGVGGNDIYHSVSRAR 568
87 of 90	17	558 NDIYHSVSRARTRYLLL 574
88 of 90	18	564 VSRARTRYLLLCLLLLTV 581
89 of 90	18	571 YLLLCLLLLTVGVGIFLL 588
90 of 90	14	578 LLTVGVGIFLLPAR 591

Table 2		
Peptide	**Solubility**	**Solvent**
1 of 90	1 mg/mL	100% DMSO
2 of 90	1 mg/mL	30% formic acid in water
3 of 90	1 mg/mL	50% acetic acid in water
4 of 90	1 mg/mL	70% acetonitrile in water
5 of 90	1 mg/mL	50% acetic acid in water
6 of 90	1 mg/mL	50% acetic acid in water
7 of 90	1 mg/mL	50% acetic acid in water
8 of 90	1 mg/mL	50% acetic acid in water
9 of 90	1 mg/mL	50% acetic acid in water
10 of 90	1 mg/mL	50% acetic acid in water
11 of 90	1 mg/mL	50% acetic acid in water
12 of 90	1 mg/mL	50% acetic acid in water
13 of 90	1 mg/mL	50% acetic acid in water
14 of 90	1 mg/mL	50% acetic acid in water
15 of 90	1 mg/mL	50% acetic acid in water

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Table 2		
Peptide	**Solubility**	**Solvent**
16 of 90	1 mg/mL	50% acetic acid in water
17 of 90	1 mg/mL	50% acetic acid in water
18 of 90	1 mg/mL	50% acetic acid in water
19 of 90	1 mg/mL	50% acetic acid in water
20 of 90	1 mg/mL	50% acetic acid in water
21 of 90	1 mg/mL	50% acetic acid in water
22 of 90	1 mg/mL	50% acetic acid in water
23 of 90	1 mg/mL	50% acetic acid in water
24 of 90	1 mg/mL	50% acetic acid in water
25 of 90	1 mg/mL	50% acetic acid in water
26 of 90	1 mg/mL	50% acetic acid in water
27 of 90	1 mg/mL	50% acetic acid in water
28 of 90	1 mg/mL	50% acetic acid in water
29 of 90	1 mg/mL	50% acetic acid in water
30 of 90	1 mg/mL	Water
31 of 90	1 mg/mL	50% acetic acid in water
32 of 90	1 mg/mL	50% acetic acid in water
33 of 90	1 mg/mL	50% acetic acid in water
34 of 90	1 mg/mL	50% acetic acid in water
35 of 90	1 mg/mL	50% acetic acid in water
36 of 90	1 mg/mL	50% acetic acid in water
37 of 90	1 mg/mL	50% acetic acid in water
38 of 90	1 mg/mL	50% acetic acid in water
39 of 90	1 mg/mL	Water
40 of 90	1 mg/mL	50% acetic acid in water
41 of 90	1 mg/mL	Water
42 of 90	1 mg/mL	50% acetic acid in water
43 of 90	1 mg/mL	50% acetic acid in water
44 of 90	1 mg/mL	50% acetic acid in water
45 of 90	1 mg/mL	50% acetic acid in water
46 of 90	1 mg/mL	30% formic acid in water
47 of 90	1 mg/mL	Water
48 of 90	1 mg/mL	Water
49 of 90	1 mg/mL	70% acetonitrile in water
50 of 90	1 mg/mL	30% formic acid in water
51 of 90	1 mg/mL	30% formic acid in water
52 of 90	1 mg/mL	100% DMSO
53 of 90	1 mg/mL	30% formic acid in water
54 of 90	1 mg/mL	70% acetonitrile in water
55 of 90	1 mg/mL	Water
56 of 90	1 mg/mL	70% acetonitrile in water
57 of 90	1 mg/mL	50% acetic acid in water

Table 2		
Peptide	**Solubility**	**Solvent**
58 of 90	1 mg/mL	Water
59 of 90	1 mg/mL	Water
60 of 90	1 mg/mL	70% acetonitrile in water
61 of 90	1 mg/mL	70% acetonitrile in water
62 of 90	1 mg/mL	70% acetonitrile in water
63 of 90	1 mg/mL	70% acetonitrile in water
64 of 90	1 mg/mL	100% DMSO
65 of 90	1 mg/mL	50% acetic acid in water
66 of 90	1 mg/mL	100% DMSO
67 of 90	1 mg/mL	70% acetonitrile in water
68 of 90	1 mg/mL	50% acetic acid in water
69 of 90	1 mg/mL	30% formic acid in water
70 of 90	1 mg/mL	50% acetic acid in water
71 of 90	1 mg/mL	70% acetonitrile in water
72 of 90	1 mg/mL	30% formic acid in water
73 of 90	1 mg/mL	70% acetonitrile in water
74 of 90	1 mg/mL	Water
75 of 90	1 mg/mL	Water
76 of 90	1 mg/mL	70% acetonitrile in water
77 of 90	1 mg/mL	Water
78 of 90	1 mg/mL	Water
79 of 90	1 mg/mL	Water
80 of 90	1 mg/mL	Water
81 of 90	1 mg/mL	70% acetonitrile in water
82 of 90	1 mg/mL	70% acetonitrile in water
83 of 90	1 mg/mL	70% acetonitrile in water
84 of 90	1 mg/mL	30% formic acid in water
85 of 90	1 mg/mL	30% formic acid in water
86 of 90	1 mg/mL	30% formic acid in water
87 of 90	1 mg/mL	70% acetonitrile in water
88 of 90	1 mg/mL	70% acetonitrile in water
89 of 90	1 mg/mL	100% DMSO
90 of 90	1 mg/mL	50% acetic acid in water

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