

**Peptide Array, Hepatitis C Virus, J4, NS3 Protein**

**Catalog No. NR-3742**

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

**Product Description:** The 98-peptide array spans the NS3 protein of hepatitis C virus, J4 (genotype 1b; GenPept: AAC15722). Peptides are 15- to 19-mers, with 11 or 12 amino acid overlaps.

**Lot: T5251-1 to T5251-98**

The following information applies to all peptides:

- Appearance White lyophilized powder
- Mass spectral analysis Correct MW by MALDI-TOF
- Counter Ion Trifluoroacetate

Peptide-specific information is shown in the two tables below.

Table 1							
Peptide	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Hydrophilicity	Purity by HPLC <sup>a</sup>	Peptide Content <sup>b</sup>
1 of 98	4/14/2011	18	1 APITAYSQQTRGVLCII 18	1891.24	0.57	91.0%	89.0%
2 of 98	4/14/2011	18	7 SQQTRGVLCIITSLTGR 24	1890.21	0.13	90.6%	84.5%
3 of 98	4/14/2011	16	14 LGCIITSLTGRDKNQV 29	1718.02	0.09	98.1%	83.4%
4 of 98	4/14/2011	18	19 TSLTGRDKNQVEGEVQVV 36	1959.16	-0.66	87.9%	86.1%
5 of 98	4/14/2011	18	26 KNQVEGEVQVVSTATQSF 43	1951.14	-0.38	98.1%	89.5%
6 of 98	4/14/2011	16	33 VQVVSTATQSFATCI 48	1667.96	1.19	97.7%	87.5%
7 of 98	4/14/2011	18	38 TATQSFLATCINGVCWTV 55	1915.23	0.9	99.3%	89.4%
8 of 98	4/14/2011	18	45 ATCINGVCWTVYHGAGSK 62	1867.15	0.29	95.6%	84.5%
9 of 98	4/14/2011	17	52 CWTVYHGAGSKTLGPK 68	1776.06	-0.24	86.5%	79.8%
10 of 98	4/14/2011	18	58 GAGSKTLGPKGITQMY 75	1777.09	-0.32	93.1%	83.9%
11 of 98	4/14/2011	18	65 AGPKGITQMYTNVDL 82	1933.23	-0.26	100.0%	89.1%
12 of 98	4/14/2011	16	72 TQMYTNVDLVLGWQA 87	1854.08	-0.11	93.0%	89.3%
13 of 98	4/14/2011	18	77 NVDLVLGWQAPPGARS 94	1926.20	-0.15	94.0%	89.4%
14 of 98	4/14/2011	18	84 GWQAPPGARSMTPCSC 101	1793.05	-0.42	97.5%	90.2%
15 of 98	4/14/2011	17	91 ARSMTPCSCSSDLYLV 107	1790.08	0.31	100.0%	88.7%
16 of 98	4/14/2011	18	97 CSCGSSDLYLVTRHAD 114	1939.21	0.43	100.0%	86.0%
17 of 98	4/14/2011	16	104 LYLVTRHADVIPVRRR 119	1964.37	-0.11	100.0%	74.5%
18 of 98	4/14/2011	18	109 RHADVIPVRRRGDSRG 126	2047.33	-1.01	96.3%	73.0%
19 of 98	4/14/2011	17	116 VRRRGDSRGSLLSPRP 132	1908.21	-0.96	99.0%	73.5%
20 of 98	4/14/2011	15	122 SRGSLLSPRPVSYLK 136	1659.96	-0.36	99.9%	78.5%
21 of 98	4/14/2011	18	126 LLSRPVSYLKSSGGPL 143	1828.16	0.03	90.9%	84.2%
22 of 98	4/14/2011	18	133 SYLKGSSGGPLLCPSGH 150	1759.03	0.09	96.8%	84.7%
23 of 98	4/14/2011	18	140 GGPLLCPSGHVGVFRA 157	1737.07	0.88	91.2%	83.6%
24 of 98	4/14/2011	18	147 SGHVGVFRAAVCTRG 164	1786.10	0.93	95.8%	79.7%
25 of 98	4/14/2011	17	154 FRAAVCTRGVAKAVDF 170	1824.19	0.88	97.2%	81.0%
26 of 98	4/14/2011	16	160 TRGVAKAVDFIPVESH 175	1720.04	0.41	97.4%	83.5%

Table 1

Peptide	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Hydrophilicity	Purity by HPLC <sup>a</sup>	Peptide Content <sup>b</sup>
27 of 98	4/14/2011	16	165 KAVDFIPVESMETTMR 180	1854.19	-0.09	96.6%	84.4%
28 of 98	4/14/2011	15	170 IPVESMETTMRSPVF 184	1724.04	0.12	94.6%	87.2%
29 of 98	4/14/2011	19	174 SMETTMRSPVFTDNSTPPA 192	2069.31	-0.65	89.0%	90.0%
30 of 98	4/14/2011	18	182 PVFTDNSTPPAVPQTFQV 199	1945.18	-0.18	91.9%	89.5%
31 of 98	4/14/2011	16	189 TPPAVPQTFQVAHLHA 204	1713.97	0.05	87.4%	83.5%
32 of 98	4/14/2011	17	194 PQTFQVAHLHAPTGS GK 210	1776.0	-0.54	88.2%	79.6%
33 of 98	4/14/2011	18	200 AHLHAPTGS GKSTKVPAA 217	1729.97	-0.33	84.0%	76.1%
34 of 98	4/14/2011	18	207 GSGKSTKVPAA YAAQGYK 224	1784.02	-0.64	98.6%	79.6%
35 of 98	4/14/2011	15	214 VPAAYAAQGYKVLVL 228	1562.89	1.03	98.5%	88.3%
36 of 98	4/14/2011	17	218 YAAQGYKVLV LNPSVAA 234	1765.07	0.65	100.0%	88.6%
37 of 98	4/14/2011	18	224 KVLV LNPSVAATLGF GAY 241	1820.18	1.09	95.7%	89.1%
38 of 98	4/14/2011	18	231 SVAATLGF GAYMSKAHGI 248	1781.08	0.69	93.3%	83.6%
39 of 98	4/14/2011	16	238 FGAYMSKAHGIDPNR 253	1777.05	-0.36	92.1%	79.6%
40 of 98	4/14/2011	17	243 SKAHGIDPNIR TGVRTI 259	1835.11	-0.48	84.5%	77.3%
41 of 98	4/14/2011	17	249 DPNIR TGVRTITTTG GSI 265	1757.98	-0.28	88.0%	83.7%
42 of 98	4/14/2011	18	255 GVRTITTTG GSITYSTY GK 272	1862.09	-0.25	80.2%	84.6%
43 of 98	4/14/2011	18	262 GGSITYSTY GKFLADGGC 279	1796.99	0.02	97.3%	88.7%
44 of 98	4/14/2011	18	269 TYGKFLADGGC SGGAYDI 286	1794.97	0.01	88.1%	88.7%
45 of 98	4/14/2011	18	276 DGGCSGGAYDIICDECH 293	1828.0	0.11	91.6%	87.5%
46 of 98	4/14/2011	18	283 AYDIICDECHSTDSTTI 300	2000.2	0.14	96.5%	89.8%
47 of 98	4/14/2011	18	290 DECHSTDSTTILGIGTVL 307	1862.06	0.24	99.5%	89.0%
48 of 98	4/14/2011	17	297 STTILGIGTVLDQAETA 313	1689.89	0.56	100.0%	88.1%
49 of 98	4/14/2011	18	303 IGTVLDQAETAGARLVVL 320	1826.14	0.93	90.2%	87.9%
50 of 98	4/14/2011	18	310 AETAGARLVVLATATPPG 327	1694.96	0.61	98.9%	88.1%
51 of 98	4/14/2011	17	317 LVVLATATPPGSVTVPH 333	1658.97	0.98	98.4%	87.9%
52 of 98	4/14/2011	17	323 ATPPGSVTVPHNIEEI 339	1757.98	-0.21	98.8%	88.7%
53 of 98	4/14/2011	19	329 VTVPHNIEEIGLSNNGEI 347	2032.26	-0.21	99.9%	89.9%
54 of 98	4/14/2011	18	337 EEIGLSNNGEIPFYGKAI 354	1951.18	-0.24	98.2%	89.5%
55 of 98	4/14/2011	17	344 NGEIPFYGKAIPIEAIK 360	1860.2	0.05	99.1%	84.5%
56 of 98	4/14/2011	18	350 YGKAIPIEAIKGRHLIF 367	1983.41	0.28	98.9%	78.7%
57 of 98	4/14/2011	17	357 EAIKGRHLIFCHSKKK 373	1952.37	-0.69	86.9%	68.2%
58 of 98	4/14/2011	18	363 RHLIFCHSKKKCELA AK 380	2127.58	-0.6	94.4%	71.0%
59 of 98	4/14/2011	17	370 SKKKCELA AKLTGLGL 386	1775.16	-0.21	93.9%	75.8%
60 of 98	4/14/2011	18	376 ELAAKLTGLGLNAVAYYR 393	1923.26	0.39	88.4%	84.9%
61 of 98	4/14/2011	18	383 GLGLNAVAYYRGLDVSVI 400	1880.19	0.89	96.7%	89.3%
62 of 98	4/14/2011	18	390 AYYRGLDVSVIPIGDVV 407	1933.25	0.69	96.8%	89.5%
63 of 98	4/14/2011	18	397 VSVIPIGDVVVVATDAL 414	1764.11	1.64	97.2%	88.5%
64 of 98	4/14/2011	15	404 GDVVVVATDALMTGF 418	1494.74	1.31	90.0%	86.8%
65 of 98	4/14/2011	18	408 VVATDALMTGFTGDFDSV 425	1846.06	0.74	91.6%	89.0%
66 of 98	4/14/2011	18	415 MTGFTGDFDSVIDCNTCV 432	1925.16	0.43	90.1%	89.0%
67 of 98	4/14/2011	17	422 FDSVIDCNTCVTQTVDF 438	1907.12	0.43	Crude	89.3%
68 of 98	4/14/2011	17	428 CNTCVTQTVDFSLDPTF 444	1891.12	0.21	95.1%	88.2%
69 of 98	4/14/2011	19	433 TQTVDFSLDPTFTIETT V 451	2116.32	0.05	91.9%	90.3%
70 of 98	4/14/2011	18	441 DPTFTIETTVPQDAVSR 458	1978.16	-0.47	93.2%	89.7%
71 of 98	4/14/2011	17	448 TTVVPQDAVSRQRGR 464	1915.11	-1.41	88.1%	77.6%
72 of 98	4/14/2011	16	454 DAVSRQRGRGRTGRGR 469	1815.0	-1.97	90.6%	69.5%
73 of 98	4/14/2011	18	459 QRGRGRTGRGRSGIYRFV 476	2109.4	-1.34	97.5%	72.5%
74 of 98	4/14/2011	16	466 GRGRSGIYRFVTPGER 481	1808.05	-1	96.1%	77.0%

Peptide	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Hydrophilicity	Purity by HPLC <sup>a</sup>	Peptide Content <sup>b</sup>
75 of 98	4/14/2011	16	471 GIYRFVTPGERPSGMF 486	1814.11	-0.22	98.6%	84.1%
76 of 98	4/14/2011	16	476 VTPGERPSGMFDSSVL 491	1678.9	-0.11	80.8%	87.5%
77 of 98	4/14/2011	17	481 RPSGMFDSSVLCECYDA 497	1880.12	-0.07	82.7%	89.2%
78 of 98	4/14/2011	18	487 DSSVLCECYDAGCAWYEL 504	2027.25	0.19	99.3%	89.9%
79 of 98	4/14/2011	18	494 CYDAGCAWYELTPAETSV 511	1979.19	0.01	83.6%	89.5%
80 of 98	4/14/2011	17	501 WYELTPAETSVRLRAYL 517	2068.38	-0.24	81.4%	85.8%
81 of 98	4/14/2011	18	507 AETSVRLRAYLNTPLPV 524	1957.28	0.02	81.8%	85.0%
82 of 98	4/14/2011	18	514 RAYLNTPLPVQDHLF 531	2073.38	-0.26	81.1%	85.8%
83 of 98	4/14/2011	16	521 GLPVCQDHLFWESVF 536	1906.16	0.2	99.3%	88.3%
84 of 98	4/14/2011	18	525 QDHLFWESVFTGLTHI 542	2162.43	0.03	95.4%	86.3%
85 of 98	4/14/2011	16	532 WESVFTGLTHIDAHFL 547	1873.11	0.42	97.9%	84.6%
86 of 98	4/14/2011	17	537 TGLTHIDAHFLSQTKQA 553	1868.1	-0.33	81.6%	81.3%
87 of 98	4/14/2011	18	543 DAHFLSQTKQAGDNFPYL 560	2052.25	-0.7	95.1%	85.7%
88 of 98	4/14/2011	18	550 TKQAGDNFPYLVAQATV 567	1986.23	-0.19	90.7%	89.7%
89 of 98	4/14/2011	17	557 FPYLVAYQATVCARAQA 573	1872.19	0.59	83.1%	89.2%
90 of 98	4/14/2011	16	563 YQATVCARAQAPPSW 578	1745.99	-0.38	91.1%	88.5%
91 of 98	4/14/2011	18	568 CARAQAPPSWDQMWKCL 585	2088.48	-0.57	85.0%	85.9%
92 of 98	4/14/2011	18	575 PPSWDQMWKCLIRLKPTL 592	2212.73	-0.39	82.4%	81.9%
93 of 98	4/14/2011	18	582 WKCLIRLKPTLHGPTLL 599	2086.64	0.17	95.1%	78.5%
94 of 98	4/14/2011	17	589 KPTLHGPTLLYRLGAV 605	1833.22	0.08	92.6%	80.5%
95 of 98	4/14/2011	17	595 PTLLYRLGAVQNEVIL 611	1896.28	0.55	84.7%	89.2%
96 of 98	4/14/2011	18	601 RLGAVQNEVILTHPITKY 618	2052.42	0	91.9%	81.8%
97 of 98	4/14/2011	18	608 EVILTHPITKYIMACMSA 625	2021.51	0.87	85.5%	85.7%
98 of 98	4/14/2011	17	615 ITKYIMACMSADLEVVT 631	1888.31	0.98	92.2%	89.0%

<sup>a</sup>% full-length  
<sup>b</sup>Remainder is salt and water

Peptide		Ala (A)	Arg (R)	Asx (N,D)	Cys (C)	Glx (Q,E)	Gly (G)	His (H)	Ile (I)	Leu (L)	Lys (K)	Met (M)	Phe (F)	Pro (P)	Ser (S)	Thr (T)	Trp (W)	Tyr (Y)	Val (V)
1 of 98	Expected	2.00	1.00		1.00	2.00	2.00		3.00	1.00				1.00	1.00	2.00		1.00	1.00
	Actual	1.77	1.01		0.490 <sup>a</sup>	1.82	2.11		1.62 <sup>b</sup>	0.77				1.00	0.96	1.64		1.08	0.77
2 of 98	Expected		2.00		1.00	2.00	3.00		2.00	2.00					2.00	3.00			1.00
	Actual		2.00		0.47 <sup>a</sup>	2.05	3.03		0.94 <sup>b</sup>	1.70					2.09	2.61			0.79
3 of 98	Expected		1.00	2.00	1.00	1.00	2.00		2.00	2.00	1.00				1.00	2.00			1.00
	Actual		1.09	2.11	0.48 <sup>a</sup>	1.06	2.08		1.16 <sup>b</sup>	2.00	1.15				1.07	1.85			1.09
4 of 98	Expected		1.00	2.00		4.00	2.00			1.00	1.00				1.00	2.00			4.00
	Actual		1.00	1.94		3.71	2.10			0.91	0.96				0.85	1.72			2.68 <sup>b</sup>
5 of 98	Expected	1.00		1.00		5.00	1.00				1.00		1.00		2.00	2.00			4.00
	Actual	1.00		0.94		4.60	1.10				0.98		0.94		1.84	1.73			2.77 <sup>b</sup>
6 of 98	Expected	2.00			1.00	2.00			1.00	1.00			1.00		2.00	3.00			3.00
	Actual	2.00			0.62 <sup>a</sup>	1.82			1.15	1.00			1.08		2.00	2.60			1.78 <sup>b</sup>
7 of 98	Expected	2.00		1.00	2.00	1.00	1.00		1.00	1.00			1.00		1.00	4.00	1.00		2.00
	Actual	2.00		0.95	0.970 <sup>a</sup>	0.94	1.02		0.82	0.98			0.91		1.03	3.75	0.00 <sup>c</sup>		1.94
8 of 98	Expected	2.00		1.00	2.00		3.00	1.00	1.00		1.00				1.00	2.00	1.00	1.00	2.00
	Actual	2.00		1.00	0.92 <sup>a</sup>		2.96	1.08	0.91		1.01				1.00	1.66	0.00 <sup>c</sup>	0.88	1.76

Table 2 - Amino Acid Analysis

Peptide		Ala (A)	Arg (R)	Asx (N,D)	Cys (C)	Glx (Q,E)	Gly (G)	His (H)	Ile (I)	Leu (L)	Lys (K)	Met (M)	Phe (F)	Pro (P)	Ser (S)	Thr (T)	Trp (W)	Tyr (Y)	Val (V)
9 of 98	Expected	2.00			1.00		3.00	1.00		1.00	2.00			1.00	1.00	2.00	1.00	1.00	1.00
	Actual	1.79			0.61 <sup>a</sup>		2.87	1.05		0.84	2.11			1.00	0.94	1.88	0.00 <sup>c</sup>	0.87	0.82
10 of 98	Expected	2.00				1.00	4.00		1.00	1.00	2.00	1.00		2.00	1.00	2.00		1.00	
	Actual	1.89				1.01	3.99		1.00	0.96	1.89	0.90		2.00	1.01	1.75		0.97	
11 of 98	Expected	1.00		3.00		1.00	2.00		1.00	2.00	1.00	1.00		2.00		2.00		1.00	1.00
	Actual	1.02		2.96		0.98	2.16		0.98	1.88	1.04	0.97		2.00		1.66		0.99	0.92
12 of 98	Expected	1.00		3.00		2.00	1.00			2.00		1.00				2.00	1.00	1.00	2.00
	Actual	1.00		2.73		1.81	0.89			1.76		0.99				1.63	0.00 <sup>c</sup>	1.02	1.82
13 of 98	Expected	2.00	1.00	3.00		1.00	2.00			2.00		1.00		2.00	1.00		1.00		2.00
	Actual	1.82	1.12	2.61		0.89	2.00			1.79		1.02		2.07	0.98		0.00 <sup>c</sup>		1.80
14 of 98	Expected	2.00	1.00		2.00	1.00	3.00					1.00		3.00	3.00	1.00	1.00		0.00
	Actual	2.00	1.08		0.91 <sup>a</sup>	0.96	2.74					1.01		2.97	2.89	0.93	0.00 <sup>c</sup>		0.00
15 of 98	Expected	1.00	1.00	1.00	2.00		1.00			2.00		1.00		1.00	4.00	1.00		1.00	1.00
	Actual	0.98	0.96	1.02	0.89 <sup>a</sup>		1.08			1.75		0.95		1.00	3.60	0.82		1.00	0.94
16 of 98	Expected	1.00	1.00	2.00	2.00		1.00	1.00	1.00	2.00					3.00	1.00		1.00	2.00
	Actual	1.07	0.96	2.01	0.71 <sup>a</sup>		1.00	1.00	0.69 <sup>b</sup>	1.72					2.62	0.88		0.84	1.47 <sup>b</sup>
17 of 98	Expected	1.00	4.00	1.00				1.00	1.00	2.00				1.00		1.00		1.00	3.00
	Actual	1.00	3.72	1.02				1.12	0.62 <sup>b</sup>	1.77				1.09		0.95		0.94	2.36 <sup>b</sup>
18 of 98	Expected	1.00	5.00	2.00			2.00	1.00	1.00	1.00				1.00	2.00				2.00
	Actual	0.96	4.98	1.99			2.00	1.07	0.61 <sup>b</sup>	1.01				1.05	1.89				1.49 <sup>b</sup>
19 of 98	Expected		5.00	1.00			2.00			2.00				2.00	3.00				2.00
	Actual		4.70	1.07			2.00			1.87				2.11	2.95				1.87
20 of 98	Expected		2.00				1.00			3.00	1.00			2.00	4.00			1.00	1.00
	Actual		1.72				0.98			2.70	1.02			2.00	3.60			1.06	1.00
21 of 98	Expected		1.00				3.00			4.00	1.00			3.00	4.00			1.00	1.00
	Actual		1.07				3.09			3.75	0.97			2.84	3.55			1.00	0.98
22 of 98	Expected				1.00		4.00	1.00		3.00	1.00			2.00	4.00			1.00	1.00
	Actual				0.52 <sup>a</sup>		3.67	0.82		2.72	0.90			2.00	3.77			1.08	0.92
23 of 98	Expected	2.00	1.00		1.00		4.00	1.00		2.00			1.00	2.00	1.00				3.00
	Actual	1.71	1.00		0.49 <sup>a</sup>		3.86	0.98		1.96			1.01	2.08	0.97				1.85 <sup>b</sup>
24 of 98	Expected	3.00	2.00		1.00		3.00	1.00					1.00		1.00	1.00			5.00
	Actual	2.73	1.84		0.46 <sup>a</sup>		3.00	1.16					0.94		1.04	0.77			3.90 <sup>b</sup>
25 of 98	Expected	4.00	2.00	1.00	1.00		1.00		1.00		1.00		2.00			1.00			3.00
	Actual	3.88	1.88	1.05	0.59 <sup>a</sup>		1.00		0.98		1.07		1.69			1.00			2.79
26 of 98	Expected	2.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			3.00
	Actual	2.00	0.97	0.92		0.89	1.07		0.76	0.94	1.13	0.96	0.99	1.02	0.92				2.70
27 of 98	Expected	1.00	1.00	1.00		2.00			1.00	1.00	2.00	1.00	1.00	1.00	1.00	2.00			2.00
	Actual	1.00	1.08	0.89		1.79			0.85	0.98	1.86	0.95	0.84	1.05	1.78				1.79
28 of 98	Expected		1.00			2.00			1.00			2.00	1.00	2.00	2.00	2.00			2.00
	Actual		1.04			1.92			0.96			1.85	1.13	2.00	1.80	1.66			1.71
29 of 98	Expected	1.00	1.00	2.00		1.00						2.00	1.00	3.00	3.00	4.00			1.00
	Actual	0.89	1.07	2.02		1.05						2.00	1.16	2.77	2.66	3.76			0.97
30 of 98	Expected	1.00		2.00		2.00							2.00	4.00	1.00	3.00			3.00
	Actual	1.08		2.00		2.11							1.90	4.00	0.99	2.67			2.81
31 of 98	Expected	3.00				2.00		2.00	0.00	1.00			1.00	3.00		2.00			2.00
	Actual	2.77				2.07		1.88	0.00	0.94			0.98	3.00		1.74			1.93
32 of 98	Expected	2.00				2.00	2.00	2.00		1.00	1.00		1.00	2.00	1.00	2.00			1.00
	Actual	1.88				1.97	1.93	2.10		0.96	1.06		0.94	2.00	0.96	1.68			1.07

Table 2 - Amino Acid Analysis

Peptide		Ala (A)	Arg (R)	Asx (N,D)	Cys (C)	Glx (Q,E)	Gly (G)	His (H)	Ile (I)	Leu (L)	Lys (K)	Met (M)	Phe (F)	Pro (P)	Ser (S)	Thr (T)	Trp (W)	Tyr (Y)	Val (V)
33 of 98	Expected	4.00					2.00	2.00		1.00	2.00			2.00	2.00	2.00			1.00
	Actual	3.79					2.11	3.05		1.16	1.77			2.00	2.03	1.73			0.79
34 of 98	Expected	4.00				1.00	3.00				3.00			1.00	2.00	1.00		2.00	1.00
	Actual	3.69				0.93	3.15				2.71			1.05	1.90	0.81		2.00	0.99
35 of 98	Expected	4.00				1.00	1.00			2.00	1.00			1.00				2.00	3.00
	Actual	3.64				1.01	1.13			1.70	0.91			1.00				2.10	2.78
36 of 98	Expected	4.00		1.00		1.00	1.00			2.00	1.00			1.00	1.00			2.00	3.00
	Actual	3.88		0.95		0.89	1.02			1.63	0.95			1.00	0.91			1.78	2.84
37 of 98	Expected	3.00		1.00			2.00			3.00	1.00		1.00	1.00	1.00	1.00		1.00	3.00
	Actual	2.79		0.99			2.06			2.64	0.94		0.90	1.00	0.97	0.87		0.91	2.80
38 of 98	Expected	4.00					3.00	1.00	1.00	1.00	1.00	1.00	1.00		2.00	1.00		1.00	1.00
	Actual	3.72					2.75	1.03	0.89	0.95	0.86	0.91	0.89		1.75	0.83		1.00	0.94
39 of 98	Expected	2.00	1.00	2.00			2.00	1.00	2.00		1.00	1.00	1.00	1.00	1.00				1.00
	Actual	1.76	0.73	1.73			1.92	1.07	1.61		0.83	0.87	0.86	1.00	0.93				0.99
40 of 98	Expected	1.00	2.00	2.00			2.00	1.00	3.00		1.00			1.00	1.00	2.00			1.00
	Actual	0.89	1.71	1.64			1.87	1.02	2.59		0.85			1.00	0.92	1.80			0.81
41 of 98	Expected		2.00	2.00			3.00		3.00					1.00	1.00	4.00			1.00
	Actual		1.86	1.83			3.00		2.78					1.05	0.94	3.60			0.97
42 of 98	Expected		1.00				4.00		2.00	0.00	1.00				2.00	5.00		2.00	1.00
	Actual		0.84				3.90		1.98	0.00	1.03				2.08	4.58		2.00	0.94
43 of 98	Expected	1.00		1.00	1.00		5.00		1.00	1.00	1.00		1.00		2.00	2.00			2.00
	Actual	1.00		0.99	0.52 <sup>a</sup>		4.99		0.95	1.05	0.96		0.96		1.67	1.64			2.00
44 of 98	Expected	2.00		2.00	1.00		5.00		1.00	1.00	1.00		1.00		1.00	1.00			2.00
	Actual	1.76		1.83	0.51 <sup>a</sup>		4.77		1.02	1.00	0.88		0.91		0.99	0.79			2.00
45 of 98	Expected	1.00		3.00	3.00	1.00	4.00	1.00	3.00						1.00				1.00
	Actual	1.00		2.81	1.48 <sup>a</sup>	0.94	3.89	0.99	1.79 <sup>b</sup>						1.04				1.03
46 of 98	Expected	1.00		3.00	2.00	1.00		1.00	4.00						2.00	3.00			1.00
	Actual	1.01		2.93	0.90 <sup>a</sup>	0.98		0.93	2.51 <sup>b</sup>						1.73	2.63			1.00
47 of 98	Expected			2.00	1.00	1.00	2.00	1.00	2.00	2.00					2.00	4.00			1.00
	Actual			2.07	0.50 <sup>a</sup>	0.99	2.13	1.14	1.98	1.85					2.02	3.99			1.00
48 of 98	Expected	2.00		1.00		2.00	2.00		2.00	2.00					1.00	4.00			1.00
	Actual	2.00		1.14		2.00	2.12		1.92	1.82					1.00	3.98			0.78
49 of 98	Expected	3.00	1.00	1.00		2.00	2.00		1.00	3.00						2.00			3.00
	Actual	3.00	0.98	0.96		1.75	1.84		0.90	3.10						1.81			2.58 <sup>b</sup>
50 of 98	Expected	5.00	1.00			1.00	2.00			2.00				2.00		3.00			2.00
	Actual	4.84	1.19			0.90	2.04			2.00				1.76		2.80			1.25 <sup>b</sup>
51 of 98	Expected	2.00					1.00	1.00		2.00				3.00	1.00	3.00			4.00
	Actual	1.90					1.08	1.08		1.78				2.85	1.00	2.90			2.63 <sup>b</sup>
52 of 98	Expected	1.00		1.00		2.00	1.00	1.00	2.00					4.00	1.00	2.00			2.00
	Actual	1.00		1.01		1.74	1.11	1.20	1.95					3.82	1.04	1.60			1.93
53 of 98	Expected			3.00		3.00	2.00	1.00	3.00	1.00				2.00	1.00	1.00			2.00
	Actual			2.98		2.95	2.00	0.91	2.64	1.10				1.86	1.01	0.75			1.70
54 of 98	Expected	1.00		2.00		3.00	3.00		3.00	1.00	1.00		1.00	1.00	1.00				1.00
	Actual	0.98		2.03		2.74	2.97		2.78	1.10	1.00		0.98	1.11	1.04				1.06
55 of 98	Expected	2.00		1.00		2.00	2.00		4.00		2.00		1.00	2.00					1.00
	Actual	1.91		0.97		1.70	2.07		3.69		1.83		0.98	2.00					1.04
56 of 98	Expected	2.00	1.00			1.00	3.00	1.00	4.00	1.00	2.00		1.00	1.00					1.00
	Actual	1.71	0.98			0.85	2.70	1.09	3.77	1.01	1.80		0.76	1.00					0.91



Table 2 - Amino Acid Analysis

Peptide		Ala (A)	Arg (R)	Asx (N,D)	Cys (C)	Glx (Q,E)	Gly (G)	His (H)	Ile (I)	Leu (L)	Lys (K)	Met (M)	Phe (F)	Pro (P)	Ser (S)	Thr (T)	Trp (W)	Tyr (Y)	Val (V)
57 of 98	Expected	1.00	1.00		1.00	1.00	2.00	2.00	2.00	1.00	4.00		1.00		1.00				
	Actual	0.98	1.05		0.52 <sup>a</sup>	0.89	2.04	2.00	1.60	1.00	3.65		0.66		0.97				
58 of 98	Expected	2.00	1.00	1.00	2.00	1.00		2.00	1.00	2.00	4.00		1.00		1.00				
	Actual	2.00	1.08	1.04	0.99 <sup>a</sup>	0.99		2.03	0.80	2.02	3.77		0.75		1.08				
59 of 98	Expected	2.00		1.00	1.00	1.00	2.00			4.00	4.00				1.00	1.00			
	Actual	2.00		1.03	0.48 <sup>a</sup>	0.93	2.07			3.80	3.90				0.80	0.79			
60 of 98	Expected	4.00	1.00	1.00		1.00	2.00			4.00	1.00					1.00		2.00	1.00
	Actual	3.72	1.05	1.03		0.97	2.29			3.77	1.02					0.93		2.00	1.06
61 of 98	Expected	2.00	1.00	2.00			3.00		1.00	3.00					1.00			2.00	3.00
	Actual	1.86	1.07	2.05			3.00		0.74 <sup>b</sup>	2.79					1.06			1.82	2.47 <sup>b</sup>
62 of 98	Expected	1.00	1.00	2.00			2.00		2.00	1.00				2.00	1.00			2.00	4.00
	Actual	0.89	1.00	1.75			1.93		1.65 <sup>b</sup>	1.02				1.93	0.94			1.82	2.45 <sup>b</sup>
63 of 98	Expected	2.00		2.00			1.00		2.00	1.00				2.00	1.00	1.00			6.00
	Actual	1.93		2.10			0.89		1.66 <sup>b</sup>	1.05				2.00	0.92	0.90			3.69 <sup>b</sup>
64 of 98	Expected	2.00		2.00			2.00			1.00		1.00	1.00			2.00			4.00
	Actual	1.88		2.00			2.12			1.02		1.00	0.92			1.73			1.85 <sup>b</sup>
65 of 98	Expected	2.00		3.00			2.00			1.00		1.00	2.00		1.00	3.00			3.00
	Actual	1.75		2.66			2.07			1.15		1.16	1.90		1.00	2.62			1.48 <sup>b</sup>
66 of 98	Expected			4.00	2.00		2.00		1.00			1.00	2.00		1.00	3.00			2.00
	Actual			4.00	0.79 <sup>a</sup>		2.19		0.71 <sup>b</sup>			0.78	1.81		1.04	2.90			1.48 <sup>b</sup>
67 of 98	Expected			4.00	2.00	1.00			1.00				2.00		1.00	3.00			3.00
	Actual			3.70	0.98 <sup>a</sup>	0.80			0.80 <sup>b</sup>				1.70		0.70	2.56			2.47 <sup>b</sup>
68 of 98	Expected			3.00	2.00	1.00				1.00			2.00	1.00	1.00	4.00			2.00
	Actual			2.77	0.82 <sup>a</sup>	1.00				1.00			1.78	0.99	1.03	3.70			1.70
69 of 98	Expected			2.00		2.00			1.00	1.00			2.00	1.00	1.00	7.00		2.00	
	Actual			1.88		1.91			0.93	1.00			1.70	1.00	1.06	6.50		1.96	
70 of 98	Expected	1.00	1.00	2.00		2.00			1.00				1.00	2.00	1.00	5.00			2.00
	Actual	1.00	1.13	1.62		1.65			1.07				0.93	1.83	1.12	4.59			1.78
71 of 98	Expected	1.00	4.00	1.00		2.00	1.00							1.00	2.00	3.00			2.00
	Actual	1.00	4.04	1.05		1.78	0.86							0.94	2.03	2.59			1.75
72 of 98	Expected	1.00	6.00	1.00		1.00	3.00								2.00	1.00			1.00
	Actual	0.96	5.73	1.03		0.94	2.87								2.10	0.95			1.00
73 of 98	Expected		6.00			1.00	4.00		1.00				1.00		2.00	1.00		1.00	1.00
	Actual		5.69			0.94	3.68		1.00				0.86		2.10	1.13		1.00	0.89
74 of 98	Expected		4.00			1.00	4.00		1.00				1.00	1.00	1.00	1.00		1.00	1.00
	Actual		3.82			1.05	3.91		0.99				0.99	1.00	1.11	0.88		1.03	0.85
75 of 98	Expected		2.00			1.00	3.00		1.00			1.00	2.00	2.00	1.00	1.00		1.00	1.00
	Actual		2.00			0.92	3.00		0.91			1.06	1.74	1.82	1.14	0.96		1.10	0.82
76 of 98	Expected		1.00	1.00		1.00	2.00			1.00		1.00	1.00	2.00	3.00	1.00			2.00
	Actual		1.06	1.09		0.98	2.16			0.85		1.01	0.97	1.93	3.00	0.91			1.72
77 of 98	Expected	1.00	1.00	2.00	2.00	1.00	1.00			1.00		1.00	1.00	1.00	3.00			1.00	1.00
	Actual	0.80	1.19	1.79	0.88 <sup>a</sup>	1.05	1.26			0.80		0.94	0.98	1.00	2.73			1.08	0.83
78 of 98	Expected	2.00		2.00	3.00	2.00	1.00			2.00					2.00		1.00	2.00	1.00
	Actual	1.98		1.89	1.47 <sup>a</sup>	2.03	1.10			1.92					1.67		0.00 <sup>c</sup>	2.00	0.83
79 of 98	Expected	3.00		1.00	2.00	2.00	1.00			1.00				1.00	1.00	2.00	1.00	2.00	1.00
	Actual	2.62		0.93	0.84 <sup>a</sup>	1.77	1.06			0.95				1.00	0.97	1.66	0.00 <sup>c</sup>	1.92	0.96
80 of 98	Expected	2.00	2.00			2.00				3.00				1.00	1.00	2.00	1.00	2.00	1.00
	Actual	2.00	1.77			1.83				2.69				1.13	1.11	1.88	0.00 <sup>c</sup>	1.97	0.91

Table 2 - Amino Acid Analysis																			
Peptide		Ala (A)	Arg (R)	Asx (N,D)	Cys (C)	Glx (Q,E)	Gly (G)	His (H)	Ile (I)	Leu (L)	Lys (K)	Met (M)	Phe (F)	Pro (P)	Ser (S)	Thr (T)	Trp (W)	Tyr (Y)	Val (V)
81 of 98	Expected	2.00	2.00	1.00		1.00	1.00			3.00				2.00	1.00	2.00		1.00	2.00
	Actual	1.85	1.76	1.00		0.97	1.17			2.75				1.87	1.05	1.65		1.05	1.88
82 of 98	Expected	1.00	1.00	2.00	1.00	2.00	1.00	1.00		3.00			1.00	2.00		1.00		1.00	1.00
	Actual	0.96	1.06	1.86	0.53 <sup>a</sup>	1.78	1.09	1.04		2.60			0.99	2.00		0.94		1.12	1.01
83 of 98	Expected			1.00	1.00	3.00	1.00	1.00		2.00			2.00	1.00	1.00		1.00		2.00
	Actual			0.93	0.49 <sup>a</sup>	2.80	1.00	1.07		1.77			1.66	1.05	0.97		0.00 <sup>c</sup>		1.79
84 of 98	Expected			1.00	1.00	3.00	1.00	2.00	1.00	2.00			2.00		1.00	2.00	1.00		1.00
	Actual			1.09	0.47 <sup>a</sup>	2.71	1.05	1.70	1.00	1.81			1.80		1.00	1.70	0.00 <sup>c</sup>		0.81
85 of 98	Expected	1.00		1.00		1.00	1.00	2.00	1.00	2.00			2.00		1.00	2.00	1.00		1.00
	Actual	1.00		1.00		0.92	1.04	2.20	0.93	1.69			1.70		1.08	1.61	0.00 <sup>c</sup>		0.97
86 of 98	Expected	2.00		1.00		2.00	1.00	2.00	1.00	2.00	1.00		1.00		1.00	3.00			
	Actual	2.19		0.80		2.02	1.14	2.00	0.86	1.88	0.98		0.83		1.10	2.76			
87 of 98	Expected	2.00		3.00		2.00	1.00	1.00		2.00	1.00		2.00	1.00	1.00	1.00		1.00	
	Actual	1.66		2.63		1.61	1.03	1.04		1.75	0.79		1.61	0.89	0.97	0.89		1.00	
88 of 98	Expected	3.00		2.00		2.00	1.00			1.00	1.00		1.00	1.00		2.00		2.00	2.00
	Actual	2.75		1.96		1.83	1.14			0.89	0.96		0.89	1.00		1.73		1.89	1.84
89 of 98	Expected	5.00	1.00		1.00	2.00				1.00			1.00	1.00		1.00		2.00	2.00
	Actual	4.66	0.86		0.55 <sup>a</sup>	1.64				1.05			1.06	1.22		0.74		1.92	2.00
90 of 98	Expected	4.00	1.00		1.00	2.00								3.00	1.00	1.00	1.00	1.00	1.00
	Actual	3.61	1.00		0.52 <sup>a</sup>	1.73								3.10	0.95	0.81	0.00 <sup>c</sup>	1.08	1.00
91 of 98	Expected	3.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00		3.00	1.00		2.00		
	Actual	3.00	1.22	0.98	0.87 <sup>a</sup>	1.89				1.00	0.97	0.94		2.87	0.93		0.00 <sup>c</sup>		
92 of 98	Expected		1.00	1.00	1.00	1.00			1.00	3.00	2.00	1.00		3.00	1.00	1.00	2.00		
	Actual		1.00	0.99	0.53 <sup>a</sup>	1.01			0.78	2.64	1.79	0.83		2.97	0.96	0.96	0.00 <sup>c</sup>		
93 of 98	Expected		1.00		1.00		1.00	1.00	1.00	5.00	2.00			3.00		2.00	1.00		
	Actual		1.00		0.57 <sup>a</sup>		1.18	1.12	0.99	4.81	1.99			2.78		1.80	0.00 <sup>c</sup>		
94 of 98	Expected	1.00	1.00				2.00	1.00		4.00	1.00			3.00		2.00		1.00	1.00
	Actual	0.90	0.97				2.00	1.10		3.80	0.81			2.85		1.67		1.00	0.86
95 of 98	Expected	1.00	1.00	1.00		2.00	1.00		1.00	4.00				2.00		1.00		1.00	2.00
	Actual	1.05	1.11	1.00		1.73	1.10		0.60 <sup>b</sup>	3.78				1.95		0.98		1.12	1.47 <sup>b</sup>
96 of 98	Expected	1.00	1.00	1.00		2.00	1.00	1.00	2.00	2.00	1.00			1.00		2.00		1.00	2.00
	Actual	0.95	0.85	0.93		1.58	1.06	0.95	1.11 <sup>b</sup>	1.78	1.03			1.00		1.60		1.01	1.20 <sup>b</sup>
97 of 98	Expected	2.00			1.00	1.00		1.00	3.00	1.00	1.00	2.00		1.00	1.00	2.00		1.00	1.00
	Actual	2.10			0.62 <sup>a</sup>	0.97		1.00	1.65 <sup>b</sup>	0.82	1.15	1.80		1.14	1.09	1.75		0.98	0.46 <sup>b</sup>
98 of 98	Expected	2.00		1.00	1.00	1.00			2.00	1.00	1.00	2.00			1.00	2.00		1.00	2.00
	Actual	2.00		1.03	0.53 <sup>a</sup>	0.94			1.71	1.16	0.84	1.61			1.15	1.64		0.89	0.74 <sup>b</sup>

<sup>a</sup>Cys was partially destroyed during hydrolysis

<sup>b</sup>Val-Ile, Val-Val, Ile-Ile and/or Ile-Val bonds were only partially destroyed during hydrolysis

<sup>c</sup>Trp was completely destroyed during hydrolysis

Date: 23 AUG 2011

Signature: *Dorothy C. Young*

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