

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

Catalog No. NR-4070

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Product Description: The 90-peptide array spans the NS5b protein of hepatitis C virus, K3a/650 (genotype 3a; GenPept: BAA06044). Peptides are 14- to 19-mers, with 11 or 12 amino acid overlaps.

Lot: T5266-1 to T5266-90

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 ^a	Peptide Content ^b
1 of 90	4/14/2011	16	1 SMSYSWTGALITPCSA 16	1674.93	0.47	99.6%	87.0%
2 of 90	4/14/2011	18	6 WTGALITPCSAEEEEKLPI 23	1958.28	0.09	91.7%	89.6%
3 of 90	4/14/2011	18	13 PCSAEEEEKLPI SLSNSL 30	1914.18	-0.32	100.0%	89.4%
4 of 90	4/14/2011	18	20 KLPISPLSNSLLRHHNLV 37	2038.44	0.02	95.3%	78.0%
5 of 90	4/14/2011	17	27 SNSLLRHHNLVYSTSSR 43	1971.18	-0.75	83.5%	77.6%
6 of 90	4/14/2011	18	33 HHNLVYSTSSRSASQRQK 50	2086.27	-1.44	96.9%	75.3%
7 of 90	4/14/2011	18	40 TSSRSASQRQKVTDFRL 57	2095.36	-1.32	100.0%	76.2%
8 of 90	4/14/2011	18	46 SQRQKVTDFRLQVLDDH 63	2213.5	-1.32	100.0%	76.4%
9 of 90	4/14/2011	16	53 TDFRLQVLDDHYKTAL 68	1935.18	-0.51	100.0%	80.5%
10 of 90	4/14/2011	18	57 LQVLDDHYKTALQEVKER 74	2185.48	-0.94	85.3%	79.3%
11 of 90	4/14/2011	18	64 YKTALQEVKERASRVKAR 81	2133.5	-1.16	100.0%	73.2%
12 of 90	4/14/2011	18	71 VKERASRVKARMLSIEEA 88	2073.46	-0.52	100.0%	75.2%
13 of 90	4/14/2011	18	78 VKARMLSIEEACALVPPH 95	1964.4	0.43	99.1%	81.2%
14 of 90	4/14/2011	17	85 IEEACALVPPHSARSKF 101	1855.16	-0.01	97.6%	80.5%
15 of 90	4/14/2011	18	91 LVPPHSARSKFGYSKDV 108	1959.25	-0.43	100.0%	77.5%
16 of 90	4/14/2011	18	98 RSKFGYSKDVRSLSKA 115	1987.26	-0.86	84.1%	74.5%
17 of 90	4/14/2011	18	105 AKDVRSLSKAINQIRSV 122	1972.29	-0.32	97.6%	77.6%
18 of 90	4/14/2011	16	112 SSKAINQIRSVWEDLL 127	1859.13	-0.19	80.4%	84.5%
19 of 90	4/14/2011	18	117 NQIRSVWEDLLEDTTPI 134	2130.36	-0.56	96.2%	90.0%
20 of 90	4/14/2011	18	124 EDLLEDTTPIPTTIMAK 141	1989.29	-0.24	92.5%	89.7%
21 of 90	4/14/2011	17	131 TPIPTTIMAKNEVFCV 147	1865.26	0.56	90.6%	89.2%
22 of 90	4/14/2011	18	137 TIMAKNEVFCVDPKGG 154	1936.3	-0.12	99.8%	80.9%
23 of 90	4/14/2011	18	144 VFCVDPKGGRKAARLIV 161	1900.34	0.49	95.0%	76.9%
24 of 90	4/14/2011	18	151 KGGRKAARLIVYDGLGVR 168	1969.38	-0.27	94.2%	74.6%
25 of 90	4/14/2011	18	158 RLIVYDGLGVRVCEKRAL 175	2100.58	0.28	82.4%	78.7%
26 of 90	4/14/2011	18	165 LGVRVCEKRALYDVIQRL 182	2131.59	0.18	83.4%	78.5%

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Peptide	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Hydrophilicity	Purity by HPLC ^a	Peptide Content ^b
27 of 90	4/14/2011	16	172 KRALYDVIQRLSIETM 187	1936.32	-0.11	93.2%	80.9%
28 of 90	4/14/2011	17	177 DVIQRLSIETMGSA YGF 193	1887.16	0.24	92.4%	89.2%
29 of 90	4/14/2011	18	183 SIETMGSA YGFQYSPRQR 200	2078.31	-0.92	99.8%	85.9%
30 of 90	4/14/2011	18	190 AYG FQYSPRQRVERLLKM 207	2242.65	-0.83	96.5%	79.5%
31 of 90	4/14/2011	16	197 PRQRVERLLKMW/TSKK 212	2056.53	-1.41	96.0%	72.6%
32 of 90	4/14/2011	18	202 ERLMKW/TSKKTPLGFSY 219	2185.64	-0.6	96.9%	79.3%
33 of 90	4/14/2011	16	209 TSKKTPLGFSYDTRCF 224	1851.13	-0.68	96.2%	80.2%
34 of 90	4/14/2011	15	214 PLGFSYDTRCFDSTV 228	1707.89	-0.11	99.1%	88.0%
35 of 90	4/14/2011	18	218 SYDTRCFDSTV TGGDIRV 235	2063.25	-0.57	96.5%	85.5%
36 of 90	4/14/2011	16	225 DSTVTGQDIRVEEAVY 240	1781.91	-0.44	82.0%	88.7%
37 of 90	4/14/2011	16	230 GQDIRVEEAVYQCCNL 245	1840.08	-0.23	95.8%	89.0%
38 of 90	4/14/2011	18	235 VEEAVYQCCNLEPEPGQA 252	1979.19	-0.48	90.4%	89.8%
39 of 90	4/14/2011	18	242 CCNLEPEPGQAISLTER 259	1947.19	-0.5	96.2%	89.5%
40 of 90	4/14/2011	18	249 PGQAISLTERLYCGGPM 266	1880.19	-0.07	93.9%	89.2%
41 of 90	4/14/2011	17	256 LTERLYCGGPMNNSKGA 272	1811.08	-0.63	82.7%	84.0%
42 of 90	4/14/2011	17	262 CGGPMNNSKGAQCGLR 278	1756.03	-0.69	92.2%	83.7%
43 of 90	4/14/2011	18	268 NSKGAQCGLR CRASGVL 285	1883.2	-0.2	89.4%	80.5%
44 of 90	4/14/2011	15	275 GYLRCRASGVLPTS F 289	1626.91	0.26	92.8%	82.7%
45 of 90	4/14/2011	18	279 CRASGVLPTSF GNTITCY 296	1890.18	0.37	87.7%	89.2%
46 of 90	4/14/2011	18	286 PTSFGNTITCYIKATAAA 303	1830.11	0.4	92.2%	88.9%
47 of 90	4/14/2011	17	293 ITCYIKATAAARAAGLR 309	1750.11	0.59	85.4%	79.5%
48 of 90	4/14/2011	17	299 ATAAARAAGLRNPDFLV 315	1713.97	0.39	99.2%	83.4%
49 of 90	4/14/2011	18	305 AAGLRNPDFLVCGDDL VV 322	1874.16	0.67	93.3%	89.2%
50 of 90	4/14/2011	18	312 DFLVCGDDL VVVAESDGV 329	1852.06	0.92	97.2%	89.2%
51 of 90	4/14/2011	18	319 DLVVVAESDGVDEDRATL 336	1903.05	0.03	96.6%	89.3%
52 of 90	4/14/2011	18	326 SDGVDEDRATLRAFTEAM 343	1984.14	-0.61	88.3%	85.1%
53 of 90	4/14/2011	16	333 RATLRAFTEAMTRYSA 348	1845.13	-0.34	83.3%	80.2%
54 of 90	4/14/2011	16	338 AFTEAMTRYSAPPGDA 353	1684.86	-0.42	94.2%	88.1%
55 of 90	4/14/2011	18	343 MTRYSAPPGDAPQPTYDL 360	1980.2	-0.96	95.5%	89.7%
56 of 90	4/14/2011	18	350 PGDAPQPTYDLELITSCS 367	1907.1	-0.39	93.0%	89.0%
57 of 90	4/14/2011	18	357 TYDLELITSCSSNVSVAR 374	1958.19	0.22	95.4%	89.6%
58 of 90	4/14/2011	18	364 TSCSSNVSVARDDK GKRY 381	1973.17	-1.12	90.3%	77.6%
59 of 90	4/14/2011	18	371 SVARDDK GKRY YLTRDA 388	2177.42	-1.44	93.4%	76.5%
60 of 90	4/14/2011	18	378 GKRY YLTRDATTPLARA 395	2116.43	-0.88	93.2%	78.8%
61 of 90	4/14/2011	18	385 TRDATTPLARA AWETARH 402	2024.24	-0.9	93.6%	78.0%
62 of 90	4/14/2011	18	392 LARA AWETARHTPVNSWL 409	2079.37	-0.32	90.5%	82.5%
63 of 90	4/14/2011	18	399 TARHTPVNSWLGSII MYA 416	2017.35	0.23	84.5%	85.5%
64 of 90	4/14/2011	18	406 NSWLGSII MYAPTIWVRM 423	2138.6	0.65	81.0%	90.4%
65 of 90	4/14/2011	18	413 IMYAPTIWVRM/MMTHFF 430	2274.88	1.08	82.3%	86.2%
66 of 90	4/14/2011	19	420 WVRM/MMTHFFSILQSQE I 438	2383.9	0.58	97.0%	87.5%
67 of 90	4/14/2011	18	428 HFFSILQSQEILDRPLDF 445	2205.52	0.02	80.7%	86.6%
68 of 90	4/14/2011	18	435 SQEILDRPLDFEMYGATY 452	2148.39	-0.53	98.7%	90.4%
69 of 90	4/14/2011	18	442 PLDFEMYGATYSV TPLDL 459	2032.31	0.18	88.5%	88.9%
70 of 90	4/14/2011	18	449 GATYSV TPLDLPAI IERL 466	1929.26	0.53	97.1%	89.4%
71 of 90	4/14/2011	17	456 PLDLPAI IERLHGLSAF 472	1862.22	0.68	96.1%	84.1%
72 of 90	4/14/2011	16	462 I IERLHGLSAF SVHSY 477	1829.1	0.43	99.2%	80.0%

Peptide	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Hydrophilicity	Purity by HPLC ^a	Peptide Content ^b
73 of 90	4/14/2011	18	467 HGLSAFSVHSYSPVELNR 484	2000.22	-0.21	80.3%	81.5%
74 of 90	4/14/2011	18	474 VHSYSPVELNRVAGTLRK 491	2026.34	-0.37	98.6%	78.0%
75 of 90	4/14/2011	18	481 ELNRVAGTLRKLGCPLR 498	1993.42	-0.3	85.5%	77.8%
76 of 90	4/14/2011	18	488 TLRKLGCPPLRAWHRAR 505	2187.67	-0.96	84.4%	71.3%
77 of 90	4/14/2011	18	495 PPLRAWHRARAVRAKLI 512	2167.66	-0.57	82.2%	70.4%
78 of 90	4/14/2011	18	502 HRARAVRAKLIQGGRAK 519	1959.35	-0.66	80.6%	68.5%
79 of 90	4/14/2011	18	509 AKLIAQGGRAKICGLYLF 526	1922.38	0.71	96.6%	80.8%
80 of 90	4/14/2011	18	516 GRAKICGLYLFNVAVRTK 533	2096.55	0.07	97.8%	78.5%
81 of 90	4/14/2011	17	523 LYLFNVAVRTKTLTPL 539	2064.52	0.14	98.0%	81.9%
82 of 90	4/14/2011	17	529 AVRTKTLTPLPAAGQL 545	1765.15	-0.03	96.1%	79.5%
83 of 90	4/14/2011	17	535 KLTPLPAAGQLDLSSWF 551	1844.16	0.23	95.6%	89.0%
84 of 90	4/14/2011	15	541 AAGQLDLSSWFTVGV 555	1550.75	0.76	93.1%	87.2%
85 of 90	4/14/2011	18	545 LDLSSWFTVGVGGNDIYH 562	1980.18	0.22	94.4%	89.4%
86 of 90	4/14/2011	17	552 TVGVGGNDIYHSVSRAR 568	1787.97	-0.3	92.5%	79.5%
87 of 90	4/14/2011	17	558 NDIYHSVSRARTRYLLL 574	2077.39	-0.39	98.6%	78.5%
88 of 90	4/14/2011	18	564 VSRARTRYLLLCLLLTV 581	2103.66	1.24	95.4%	82.0%
89 of 90	4/14/2011	18	571 YLLCLLLTVGVGIFLL 588	1976.6	2.76	Crude	89.5%
90 of 90	4/14/2011	14	578 LLTVGVGIFLLPAR 591	1468.86	1.79	93.5%	85.9%

^a% full-length
^bRemainder 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 90	Expected	2.00			1.00		1.00		1.00	1.00		1.00		1.00	4.00	2.00	1.00	1.00	
	Actual	1.80			0.48 ^b		1.00		0.99	1.02		0.93		1.13	3.70	1.80	0.00 ^a	1.09	
2 of 90	Expected	2.00			1.00	3.00	1.00		2.00	2.00	1.00			2.00	1.00	2.00	1.00		
	Actual	1.87			0.53 ^b	2.90	1.10		2.00	2.03	0.92			2.19	1.00	1.81	0.00 ^a		
3 of 90	Expected	1.00		1.00	1.00	3.00			1.00	3.00	1.00			3.00	4.00				
	Actual	1.04		0.88	0.55 ^b	2.75			1.05	2.88	0.81			3.00	3.80				
4 of 90	Expected		1.00	2.00				2.00	1.00	5.00	1.00			2.00	3.00				1.00
	Actual		1.07	1.69				2.11	1.00	4.70	0.80			1.96	2.92				0.94
5 of 90	Expected		2.00	2.00				2.00		3.00					5.00	1.00		1.00	1.00
	Actual		2.00	1.80				2.11		2.80					4.76	1.00		0.78	0.80
6 of 90	Expected	1.00	2.00	1.00		2.00		2.00		1.00	1.00				5.00	1.00		1.00	1.00
	Actual	1.10	2.19	0.90		1.91		2.10		1.11	1.09				5.00	0.98		0.96	0.94
7 of 90	Expected	1.00	3.00	1.00		2.00				1.00	2.00		1.00		4.00	2.00			1.00
	Actual	1.12	3.06	0.85		1.72				1.02	1.95		1.07		3.65	1.82			1.00
8 of 90	Expected		2.00	3.00		3.00		1.00		2.00	2.00		1.00		1.00	1.00			2.00
	Actual		2.20	2.77		2.71		1.09		1.81	1.81		1.09		0.95	1.00			1.81
9 of 90	Expected	1.00	1.00	3.00		1.00		1.00		3.00	1.00		1.00			2.00		1.00	1.00
	Actual	0.94	0.98	2.85		0.99		1.01		2.71	0.94		0.93			1.81		1.00	0.87
10 of 90	Expected	1.00	1.00	2.00		4.00		1.00		3.00	2.00					1.00		1.00	2.00
	Actual	1.00	1.20	1.75		3.79		1.12		2.85	1.76					0.99		0.85	1.80
11 of 90	Expected	3.00	3.00			3.00				1.00	3.00				1.00	1.00		1.00	2.00
	Actual	2.85	3.30			2.87				1.04	3.05				0.88	1.00		1.09	1.70

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)
12 of 90	Expected	3.00	3.00			3.00			1.00	1.00	2.00	1.00			2.00				2.00
	Actual	2.97	3.00			2.66			0.85	1.01	1.84	0.93			1.80				1.78
13 of 90	Expected	3.00	1.00		1.00	2.00		1.00	1.00	2.00	1.00	1.00		2.00	1.00				2.00
	Actual	2.95	0.98		0.53 ^b	1.95		1.12	0.92	1.99	1.05	0.98		2.00	0.96				2.05
14 of 90	Expected	3.00	1.00		1.00	2.00		1.00	1.00	1.00	1.00		1.00	2.00	2.00				1.00
	Actual	2.68	1.09		0.52 ^b	1.80		1.16	0.80	0.93	0.98		0.87	2.00	1.97				0.97
15 of 90	Expected	2.00	1.00	1.00			1.00	1.00		1.00	2.00		1.00	2.00	3.00			1.00	2.00
	Actual	1.90	1.00	0.96			1.00	1.02		0.87	1.97		0.91	1.75	2.85			1.09	1.80
16 of 90	Expected	2.00	2.00	1.00			1.00			1.00	3.00		1.00		5.00			1.00	1.00
	Actual	1.78	1.89	0.85			1.01			0.98	2.67		1.01		4.65			1.10	1.00
17 of 90	Expected	2.00	2.00	2.00		1.00			2.00	1.00	2.00				4.00				2.00
	Actual	2.00	1.80	1.95		1.09			1.90	1.00	1.75				3.93				1.99
18 of 90	Expected	1.00	1.00	2.00		2.00			2.00	2.00	1.00				3.00		1.00		1.00
	Actual	1.00	0.84	1.95		2.01			1.75	2.12	1.01				2.83		0.00 ^a		0.90
19 of 90	Expected		1.00	3.00		3.00			2.00	2.00				1.00	1.00	3.00	1.00		1.00
	Actual		0.75	2.74		2.92			1.82	2.00				1.12	1.00	2.79	0.00 ^a		0.85
20 of 90	Expected	1.00		2.00		2.00			2.00	2.00	1.00	1.00		2.00		5.00			
	Actual	1.16		1.78		1.90			1.83	2.02	1.09	0.98		2.00		4.81			
21 of 90	Expected	1.00		1.00	1.00	1.00			2.00		1.00	1.00	1.00	2.00		4.00			2.00
	Actual	1.00		0.98	0.54 ^b	0.97			1.80		0.96	0.89	0.87	2.03		3.76			1.81
22 of 90	Expected	2.00	1.00	2.00	1.00	1.00	2.00		1.00		2.00	1.00	1.00	1.00		1.00			2.00
	Actual	1.79	1.09	1.84	0.60 ^b	0.96	2.07		0.95		1.78	0.98	0.86	1.00		0.91			1.76
23 of 90	Expected	3.00	2.00	1.00	1.00		2.00		1.00	1.00	2.00		1.00	1.00					3.00
	Actual	3.00	2.21	0.91	0.56 ^b		2.24		0.62 ^c	1.02	1.76		0.80	1.22					2.36 ^c
24 of 90	Expected	2.00	3.00	1.00			3.00		1.00	2.00	2.00			1.00				1.00	2.00
	Actual	1.97	2.74	0.85			2.90		0.59 ^f	1.93	1.86			1.08				1.00	1.51 ^c
25 of 90	Expected	1.00	3.00	1.00	1.00	1.00	1.00		1.00	3.00	1.00			1.00				1.00	3.00
	Actual	0.99	2.86	0.92	0.47 ^b	0.94	1.02		0.55 ^c	2.70	1.04			1.00				0.80	2.38 ^c
26 of 90	Expected	1.00	3.00	1.00	1.00	2.00	1.00		1.00	3.00	1.00							1.00	3.00
	Actual	0.98	3.20	1.00	0.51 ^b	1.99	1.03		0.55 ^c	2.95	0.93							0.99	2.38 ^c
27 of 90	Expected	1.00	2.00	1.00		2.00			2.00	2.00	1.00	1.00			1.00	1.00		1.00	1.00
	Actual	0.81	1.96	0.99		1.82			1.40 ^c	1.72	0.96	1.01			0.94	1.00		0.95	0.57 ^c
28 of 90	Expected	1.00	1.00	1.00		2.00	2.00		2.00	1.00		1.00	1.00		2.00	1.00		1.00	1.00
	Actual	1.00	1.00	1.04		1.94	1.88		1.37 ^c	0.98		0.92	0.95		1.80	0.94		0.97	0.52 ^c
29 of 90	Expected	1.00	2.00			3.00	2.00		1.00			1.00	1.00	1.00	3.00	1.00		2.00	
	Actual	0.93	2.12			2.75	2.01		0.93			0.81	0.94	1.00	2.75	0.79		1.82	
30 of 90	Expected	1.00	3.00			3.00	1.00			2.00	1.00	1.00	1.00	1.00	1.00			2.00	1.00
	Actual	0.78	3.00			3.03	0.85			1.92	1.14	1.11	0.93	1.06	0.83			2.10	1.07
31 of 90	Expected		3.00			2.00				2.00	3.00	1.00		1.00	1.00	1.00	1.00		1.00
	Actual		3.00			1.78				1.82	2.80	0.82		1.06	0.97	0.98	0.00 ^a		0.93
32 of 90	Expected		1.00			1.00	1.00			3.00	3.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	
	Actual		1.16			0.84	1.10			2.89	2.78	1.01	0.93	1.10	1.80	1.96	0.00 ^a	1.00	
33 of 90	Expected		1.00	1.00	1.00		1.00			1.00	2.00		2.00	1.00	2.00	3.00		1.00	
	Actual		0.86	0.95	0.55 ^b		1.06			0.92	1.86		1.85	1.00	1.85	2.77		1.06	
34 of 90	Expected		1.00	2.00	1.00		1.00			1.00			2.00	1.00	2.00	2.00		1.00	1.00
	Actual		0.97	1.77	0.56 ^b		1.05			0.94			1.75	1.00	1.81	1.71		1.05	0.94
35 of 90	Expected		2.00	3.00	1.00	1.00	1.00		1.00				1.00		2.00	3.00		1.00	2.00
	Actual		1.75	3.03	0.59 ^b	1.12	1.16		0.83				0.92		1.96	2.71		0.85	2.00

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)
36 of 90	Expected	1.00	1.00	2.00		3.00	1.00		1.00						1.00	2.00		1.00	3.00
	Actual	1.04	0.70	2.00		2.97	1.08		0.85						0.96	1.90		0.89	2.80
37 of 90	Expected	1.00	1.00	2.00	2.00	4.00	1.00		1.00	1.00								1.00	2.00
	Actual	1.00	0.84	1.96	1.19 ^b	3.81	1.03		0.77	1.08								0.95	1.85
38 of 90	Expected	2.00		1.00	2.00	6.00	1.00			1.00				2.00				1.00	2.00
	Actual	2.01		0.89	0.95 ^b	5.79	1.11			1.07				2.00				0.84	1.80
39 of 90	Expected	1.00	1.00	1.00	2.00	4.00	1.00		1.00	2.00				2.00	2.00	1.00			
	Actual	1.00	0.94	0.85	0.99 ^b	3.83	0.98		1.13	1.90				2.00	1.75	0.88			
40 of 90	Expected	1.00	1.00		1.00	2.00	3.00		1.00	2.00		1.00		2.00	2.00	1.00		1.00	
	Actual	0.90	0.87		0.53 ^b	1.66	2.77		0.87	1.91	0.00	1.10		1.71	1.72	0.98		1.00	
41 of 90	Expected	1.00	1.00	2.00	1.00	1.00	3.00			2.00	1.00	1.00		1.00	1.00	1.00		1.00	
	Actual	1.10	1.20	1.70	0.61 ^b	1.14	2.83			2.15	0.83	0.90		0.93	0.88	1.00		1.13	
42 of 90	Expected	1.00	1.00	2.00	2.00	1.00	4.00			1.00	1.00	1.00		1.00	1.00			1.00	
	Actual	0.85	1.12	2.11	0.98 ^b	0.90	3.89			0.95	0.96	0.96		1.00	0.82			1.03	
43 of 90	Expected	2.00	2.00	1.00	2.00	1.00	3.00			2.00	1.00				2.00			1.00	1.00
	Actual	1.80	2.00	0.86	0.98 ^b	1.04	3.04			1.91	0.90				1.71			0.98	0.75
44 of 90	Expected	1.00	2.00		1.00		2.00			2.00				1.00	1.00	2.00	1.00	1.00	1.00
	Actual	1.06	2.11		0.53 ^b		2.00			1.72				0.88	1.08	1.85	0.93	0.98	0.76
45 of 90	Expected	1.00	1.00	1.00	2.00		2.00		1.00	1.00				1.00	1.00	2.00	3.00	1.00	1.00
	Actual	1.00	1.04	1.00	0.98 ^b		2.21		0.94	0.82				0.83	0.98	1.95	2.91	1.04	0.92
46 of 90	Expected	4.00		1.00	1.00		1.00		2.00		1.00			1.00	1.00	1.00	4.00	1.00	
	Actual	3.68		1.01	0.54 ^b		0.97		1.44		0.92			0.90	1.00	0.96	3.72	0.85	
47 of 90	Expected	6.00	2.00		1.00		1.00		2.00	1.00	1.00						2.00	1.00	
	Actual	6.00	2.17		0.57 ^b	0.00	1.11		1.80	1.09	0.89						1.96	0.93	
48 of 90	Expected	6.00	2.00	2.00			1.00			2.00				1.00	1.00	1.00			1.00
	Actual	5.68	2.08	1.81			1.08			1.70				0.95	1.00	0.90			0.89
49 of 90	Expected	2.00	1.00	4.00	1.00		2.00			3.00				1.00	1.00				3.00
	Actual	2.05	0.77	3.67	0.54 ^b		2.00			2.85				0.84	1.04				1.83 ^c
50 of 90	Expected	1.00		4.00	1.00	1.00	2.00			2.00				1.00		1.00			5.00
	Actual	1.19		3.66	0.52 ^b	1.00	2.13			1.75				0.94		0.91			3.52 ^c
51 of 90	Expected	2.00	1.00	4.00		2.00	1.00			2.00					1.00	1.00			4.00
	Actual	1.96	1.11	3.67		1.95	1.00			1.89					1.06	0.82			2.11 ^c
52 of 90	Expected	3.00	2.00	3.00		2.00	1.00			1.00		1.00	1.00		1.00	2.00			1.00
	Actual	3.00	1.93	2.71		2.06	0.93			1.08		0.69	0.90		0.78	1.83			0.96
53 of 90	Expected	4.00	3.00			1.00				1.00		1.00	1.00		1.00	3.00		1.00	
	Actual	3.66	3.00			0.99	0.00			0.97		0.84	0.91		0.89	2.70		0.92	
54 of 90	Expected	4.00	1.00	1.00		1.00	1.00							1.00	1.00	2.00	1.00	2.00	1.00
	Actual	3.60	1.00	0.73		1.11	0.84							1.08	1.00	1.88	0.93	1.90	1.06
55 of 90	Expected	2.00	1.00	2.00		1.00	1.00			1.00				1.00	1.00	2.00		2.00	2.00
	Actual	1.76	0.75	1.76		0.95	1.07			0.97				1.00		3.85	1.00	1.64	1.85
56 of 90	Expected	1.00		2.00	1.00	2.00	1.00		1.00	2.00					3.00	2.00	2.00	1.00	
	Actual	1.00		1.95	0.54 ^b	1.80	1.00		0.91	1.78					2.84	1.70	1.75	0.91	
57 of 90	Expected	1.00	1.00	2.00	1.00	1.00			1.00	2.00					4.00	2.00		1.00	2.00
	Actual	0.89	0.94	1.77	0.45 ^b	1.02			0.93	2.01					3.66	1.87		1.00	1.70
58 of 90	Expected	1.00	2.00	3.00	1.00		1.00					2.00			4.00	1.00		1.00	2.00
	Actual	0.91	2.12	3.00	0.53 ^b		1.00					1.85			3.85	0.81		1.08	1.94
59 of 90	Expected	2.00	3.00	3.00			1.00			1.00	2.00				1.00	1.00		3.00	1.00
	Actual	1.80	3.00	2.78			1.04			0.94	1.75				0.94	0.84		2.92	1.00

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)
60 of 90	Expected	3.00	3.00	1.00			1.00			2.00	1.00			1.00		3.00		3.00	
	Actual	2.70	2.80	0.75			1.03			1.64	0.80			0.94		2.80		3.00	
61 of 90	Expected	5.00	3.00	1.00		1.00		1.00	0.00	1.00				1.00		4.00	1.00		
	Actual	4.69	2.74	1.00		1.01		0.95	0.00	1.01				1.14		3.68	0.00 ^a		
62 of 90	Expected	4.00	2.00	1.00		1.00		1.00						1.00	1.00	2.00	2.00		1.00
	Actual	3.70	2.04	0.86		0.87		1.02						1.00	0.97	1.80	0.00 ^a		0.95
63 of 90	Expected	2.00	1.00	1.00			1.00	1.00	2.00	1.00		1.00		1.00	2.00	2.00	1.00	1.00	1.00
	Actual	1.74	1.15	0.86			0.99	1.00	0.78 ^c	0.97		0.87		1.02	1.93	1.78	0.00 ^a	1.12	0.95
64 of 90	Expected	1.00	1.00	1.00			1.00		3.00	1.00		2.00		1.00	2.00	1.00	2.00	1.00	1.00
	Actual	1.06	0.81	0.86			0.86		1.20 ^c	0.66		1.82		1.00	1.89	0.80	0.00 ^a	1.01	0.83
65 of 90	Expected	1.00	1.00					1.00	2.00			4.00	2.00	1.00		2.00	1.00	1.00	2.00
	Actual	0.91	1.23					1.00	1.80			3.74	1.78	1.04		1.82	0.00 ^a	1.02	1.95
66 of 90	Expected		1.00			3.00		1.00	2.00	1.00		3.00	2.00		2.00	1.00	1.00		2.00
	Actual		1.00			3.18		0.94	1.69	0.92		2.74	1.81		2.00	0.74	0.00 ^a		1.70
67 of 90	Expected		1.00	2.00		3.00		1.00	2.00	3.00			3.00	1.00	2.00				
	Actual		1.04	1.80		2.71		0.97	1.50	2.65			2.73	1.00	1.95				
68 of 90	Expected	1.00	1.00	2.00		3.00	1.00		1.00	2.00		1.00	1.00	1.00	1.00	1.00		2.00	
	Actual	1.00	1.04	1.97		2.98	1.05		0.79	1.82		0.89	0.99	1.06	0.96	1.00		1.68	
69 of 90	Expected	1.00		2.00		1.00	1.00			3.00		1.00	1.00	2.00	1.00	2.00		2.00	1.00
	Actual	0.96		1.94		0.99	0.96			2.95		0.15	0.91	2.00	0.99	1.98		1.70	1.01
70 of 90	Expected	2.00	1.00	1.00		1.00	1.00		2.00	3.00				2.00	1.00	2.00		1.00	1.00
	Actual	1.90	0.75	0.99		0.93	1.01		0.98 ^c	2.73				2.00	0.95	1.94		1.03	1.01
71 of 90	Expected	2.00	1.00	1.00		1.00	1.00	1.00	2.00	4.00			1.00	2.00	1.00				
	Actual	1.90	1.00	1.00		0.92	0.99	1.10	0.98 ^c	3.67			0.96	2.08	0.95				
72 of 90	Expected	1.00	1.00			1.00	1.00	2.00	2.00	2.00			1.00		3.00			1.00	1.00
	Actual	0.87	1.00			1.01	0.94	1.93	0.84 ^c	1.74			0.98		2.70			1.26	0.79
73 of 90	Expected	1.00	1.00	1.00		1.00	1.00	2.00		2.00			1.00	1.00	4.00			1.00	2.00
	Actual	0.97	1.04	0.93		0.79	0.95	1.76		1.96			0.95	1.00	3.89			0.91	1.71
74 of 90	Expected	1.00	2.00	1.00		1.00	1.00	1.00		2.00	1.00			1.00	2.00	1.00		1.00	3.00
	Actual	1.00	2.12	0.94		0.88	0.97	0.78		1.74	1.01			0.96	1.70	0.83		1.30	2.70
75 of 90	Expected	1.00	3.00	1.00	1.00	1.00	2.00			4.00	1.00			2.00		1.00			1.00
	Actual	0.96	2.94	1.00	0.49 ^b	0.95	2.00			3.65	1.09			1.83		0.89			0.92
76 of 90	Expected	2.00	5.00		1.00		1.00	1.00		3.00	1.00			2.00		1.00	1.00		
	Actual	1.89	5.00		0.49 ^b		0.93	1.06		2.67	1.03			1.99		0.96	0.00 ^a		
77 of 90	Expected	4.00	5.00					1.00	1.00	2.00	1.00			2.00			1.00		1.00
	Actual	3.67	5.00					1.12	0.94	1.81	0.91			1.94			0.00 ^a		0.80
78 of 90	Expected	5.00	4.00			1.00	2.00	1.00	1.00	1.00	2.00								1.00
	Actual	4.67	3.80			1.07	2.02	1.00	0.96	1.06	1.95								0.90
79 of 90	Expected	3.00	1.00		1.00	1.00	3.00		2.00	3.00	2.00		1.00					1.00	
	Actual	2.81	1.09		0.58 ^b	1.01	2.97		1.67	2.65	1.67		0.96					1.00	
80 of 90	Expected	2.00	2.00	1.00	1.00		2.00		1.00	2.00	2.00		1.00			1.00	1.00	1.00	1.00
	Actual	2.28	2.00	0.88	0.53 ^b		2.18		0.76	1.99	1.87		1.12			0.97	0.00 ^a	1.14	1.00
81 of 90	Expected	1.00	1.00	1.00						4.00	2.00		1.00	1.00		3.00	1.00	1.00	1.00
	Actual	1.07	0.85	0.79						3.63	1.80		1.02	1.05		2.70	0.00 ^a	1.00	0.84
82 of 90	Expected	3.00	1.00			1.00	1.00			3.00	2.00			2.00		3.00			1.00
	Actual	2.84	0.75			1.04	1.07			2.86	2.00			1.85		2.71			0.70
83 of 90	Expected	2.00		1.00		1.00	1.00			4.00	1.00		1.00	2.00	2.00	1.00	1.00		
	Actual	2.07		1.00		1.03	1.21			3.94	0.89		1.01	1.96	1.87	0.95	0.00 ^a		

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)
84 of 90	Expected	2.00		1.00		1.00	2.00			2.00			1.00		2.00	1.00	1.00		2.00
	Actual	1.89		1.05		0.81	1.91			1.95			1.08		1.96	0.87	0.00 ^a		2.00
85 of 90	Expected			3.00			3.00	1.00	1.00	2.00			1.00		2.00	1.00	1.00	1.00	2.00
	Actual			2.75			2.90	0.92	0.76	1.79			1.05		1.93	0.95	0.00 ^a	0.70	2.00
86 of 90	Expected	1.00	2.00	2.00			3.00	1.00	1.00						2.00	1.00		1.00	3.00
	Actual	0.95	2.04	2.07			3.00	1.14	0.86						1.90	0.94		0.90	2.78
87 of 90	Expected	1.00	3.00	2.00				1.00	1.00	3.00					2.00	1.00		2.00	1.00
	Actual	1.00	2.93	1.81				0.88	0.75	2.78					1.80	1.06		1.81	0.91
88 of 90	Expected	1.00	3.00		1.00					7.00					1.00	2.00		1.00	2.00
	Actual	1.07	2.79		0.48 ^b					6.54					1.00	1.80		0.83	1.80
89 of 90	Expected				1.00		2.00		1.00	9.00			1.00			1.00		1.00	2.00
	Actual				0.54 ^b		1.65		0.79	6.50			0.86			1.00		0.82	1.95
90 of 90	Expected	1.00	1.00				2.00		1.00	4.00			1.00	1.00		1.00			2.00
	Actual	1.00	1.09				1.85		0.78	3.63			0.80	0.98		0.85			1.96

^aTrp was completely destroyed during hydrolysis
^bCys was partially destroyed during hydrolysis
^cVal-Ile, Val-Val, Ile-Ile and/or Ile-Val bonds were only partially destroyed during hydrolysis

Date: 12 OCT 2011

Signature: *Dorothy C. Young*

Title: Technical Manager, BEI Authentication

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