

Peptide Pool, Human Immunodeficiency Virus Type 1 Subtype B (Consensus) Envelope Region

Catalog No. HRP-12540

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Product Description:

HRP-12540 is a series of 211 peptides spanning the entire human immunodeficiency virus type 1 (HIV-1) subtype B (consensus) envelope (Env) region. The HIV-1 consensus B Env reference sequence was obtained from the 2004 consensus B sequence from the Los Alamos National Laboratory (LANL) HIV database. Most peptides are 15-mers, with 11 amino acid overlaps. Each peptide from the BEI Resources Catalog Number ARP-9480 peptide array was pooled together and then distributed such that each vial contains 50 µg of each peptide, for a total of 10.55 mg of peptide.

Lot: SP1990

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The following information applies to all peptides:

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

Peptide-specific information is shown in the tables and figures below.

Table 1: Peptide Analysis

Peptide	Date of Manufacturing	Length	Sequence	Molecular Weight (amu)	Purity by HPLC ^{1,2}	Peptide Content ³
1 of 211	10/20/2022	15	MRVKGIRKQHLWR	1985.07	99.4%	67.2%
2 of 211	10/20/2022	15	GIRKQHLWRWGT	1946.30	97.9%	72.1%
3 of 211	10/20/2022	15	NYQHLWRWGTMLLGM	1905.90	98.6%	74.4%
4 of 211	11/18/2022	15	LWRWGTMLLGLMIC	1824.18	100.0%	91.4%
5 of 211	10/20/2022	15	GTMLLGLMICSAAE	1540.00	80.0%	75.8%
6 of 211	10/20/2022	15	LGMLMICSAAEKLWV	1664.87	89.8%	79.5%
7 of 211	10/20/2022	15	MICSAAEKLWVTVYY	1777.01	80.9%	81.8%
8 of 211	10/20/2022	15	AAEKLWVTVYYGVPV	1695.44	100.0%	68.9%
9 of 211	10/21/2022	15	LWVTVYYGVPVWKEA	1810.76	100.0%	73.5%
10 of 211	10/21/2022	15	VYYGVPVWKEATTTL	1727.35	97.6%	83.5%
11 of 211	10/21/2022	15	VPVWKEATTTLFCAS	1652.82	100.0%	80.8%
12 of 211	10/20/2022	15	KEATTTLFCASDAKA	1556.73	85.8%	65.8%
13 of 211	10/21/2022	15	TTLFCASDAKAYDTE	1636.03	83.4%	82.7%
14 of 211	10/21/2022	15	CASDAKAYDTEVHNV	1621.75	86.4%	72.3%
15 of 211	10/21/2022	15	AKAYDTEVHNVWATH	1742.05	89.1%	65.1%
16 of 211	10/21/2022	15	DTEVHNVWATHACVP	1678.75	98.6%	87.3%
17 of 211	10/21/2022	15	HNWATHACVPTDPN	1661.81	92.0%	74.2%
18 of 211	10/21/2022	15	ATHACVPTDPNPQEV	1578.70	98.8%	73.5%
19 of 211	10/21/2022	15	CVPTDPNPQEVVLEN	1653.94	96.5%	82.6%
20 of 211	10/21/2022	15	DPNPQEVVLENTEN	1697.04	100.0%	76.4%
21 of 211	10/29/2022	15	QEVVLENTENFNMW	1851.93	90.2%	72.6%

Table 1: Peptide Analysis (continued)

Peptide	Date of Manufacturing	Length	Sequence	Molecular Weight (amu)	Purity by HPLC ^{1,2}	Peptide Content ³
22 of 211	10/21/2022	15	LENVTENFNMWKNNM	1883.82	90.7%	90.9%
23 of 211	10/21/2022	15	TENFNMWKNNMVEQM	1915.82	100.0%	77.0%
24 of 211	10/21/2022	15	NMWKNNMVEQMHEDI	1918.87	96.0%	76.9%
25 of 211	10/21/2022	15	NNMVEQMHEDIISLW	1859.08	100.0%	76.7%
26 of 211	10/21/2022	15	EQMHEDIISLWDQSL	1843.85	84.8%	79.7%
27 of 211	10/21/2022	15	EDIISLWDQSLKPCV	1746.23	100.0%	78.1%
28 of 211	10/21/2022	15	SLWDQSLKPCVKLTP	1715.19	98.8%	79.2%
29 of 211	10/21/2022	15	QSLKPCVKLTPLCVT	1629.95	84.6%	72.3%
30 of 211	10/21/2022	15	PCVKLTPLCVTLNCT	1605.00	93.2%	84.9%
31 of 211	10/21/2022	15	LTPLCVTLNCTDLMN	1650.92	80.9%	83.9%
32 of 211	10/21/2022	15	CVTLNCTDLMNATNT	1613.99	88.2%	92.1%
33 of 211	10/21/2022	15	NCTDLMNATNTTSS	1586.96	95.3%	88.5%
34 of 211	10/21/2022	15	LMNATNTTSSSSGEK	1554.98	100.0%	76.3%
35 of 211	10/21/2022	15	TNTTSSSSGEKMEKG	1570.85	100.0%	74.6%
36 of 211	10/21/2022	15	NSSSGEKMEKGKGN	1637.95	88.0%	75.1%
37 of 211	10/21/2022	15	GEKMEKGKGNCSFN	1714.14	96.4%	74.0%
38 of 211	10/21/2022	15	EKGEKGNCSFNITTS	1671.09	85.8%	79.9%
39 of 211	10/21/2022	15	IGNCSFNITTSIRDK	1739.87	100.0%	76.1%
40 of 211	10/21/2022	15	SFNITTSIRDKVQKE	1765.96	94.1%	76.6%
41 of 211	10/21/2022	15	TTSIRDKVQKEYALF	1799.22	100.0%	76.7%
42 of 211	10/21/2022	15	RDKVQKEYALFYKLD	1916.00	94.8%	74.9%
43 of 211	10/21/2022	15	QKEYALFYKLDVVPID	1826.25	94.6%	78.9%
44 of 211	10/21/2022	15	ALFYKLDVVPIDNDN	1736.05	100.0%	82.2%
45 of 211	10/21/2022	15	KLDVVPIDNDNTSSY	1680.04	100.0%	84.1%
46 of 211	10/21/2022	15	VPIDNDNTSSYRLIS	1694.20	83.0%	69.9%
47 of 211	10/24/2022	15	NDNTSSYRLISCNST	1675.04	100.0%	78.4%
48 of 211	10/21/2022	15	SSYRLISCNSTVITQ	1672.30	96.6%	85.1%
49 of 211	10/21/2022	15	LISCNSTVITQACPK	1578.04	97.8%	83.0%
50 of 211	10/21/2022	15	NTSVITQACPKVSFE	1624.10	98.9%	78.8%
51 of 211	10/21/2022	15	ITQACPKVSFEPIPI	1642.99	88.2%	82.3%
52 of 211	10/21/2022	15	CPKVSFEPIPIHYCA	1703.90	97.2%	85.2%
53 of 211	10/21/2022	15	SFEPIPIHYCAPAGF	1649.18	100.0%	84.0%
54 of 211	10/21/2022	15	IPIHYCAPAGFAILK	1613.82	100.0%	88.8%
55 of 211	10/21/2022	15	YCAPAGFAILKCNDK	1614.08	100.0%	85.3%
56 of 211	10/23/2022	15	AGFAILKCNDKFFNG	1626.08	94.8%	75.4%
57 of 211	10/23/2022	15	ILKCNDKFFNGTGPC	1638.04	85.5%	73.5%
58 of 211	10/23/2022	15	NDKFFNGTGPCTNVS	1582.01	90.4%	79.2%
59 of 211	10/23/2022	15	FNGTGPCTNVSTVQC	1527.63	89.3%	61.1%
60 of 211	10/23/2022	15	GPCTNVSTVQCTHGI	1516.99	92.6%	86.4%
61 of 211	10/23/2022	15	NVSTVQCTHGIRPVV	1609.77	83.8%	77.3%
62 of 211	10/23/2022	15	VQCTHGIRPVVSTQL	1637.83	100.0%	80.9%
63 of 211	10/23/2022	15	HGIRPVVSTQLLLNG	1604.21	100.0%	79.6%

Table 1: Peptide Analysis (continued)

Peptide	Date of Manufacturing	Length	Sequence	Molecular Weight (amu)	Purity by HPLC ^{1,2}	Peptide Content ³
64 of 211	10/23/2022	15	PVVSTQLLLNGSLAE	1540.90	96.5%	89.2%
65 of 211	10/23/2022	15	TQLLLNGSLAEEEVV	1614.89	100.0%	76.4%
66 of 211	10/23/2022	15	LNGSLAEEEVVIRSE	1645.04	100.0%	85.0%
67 of 211	10/23/2022	15	LAEEEVVIRSENFTN	1750.04	91.9%	80.4%
68 of 211	10/23/2022	15	EVVIRSENFTNNAKT	1722.10	97.0%	68.3%
69 of 211	10/23/2022	15	RSENFTNNAKTIIVQ	1735.09	100.0%	83.6%
70 of 211	10/23/2022	15	FTNNAKTIIVQLNES	1692.18	100.0%	87.5%
71 of 211	10/23/2022	15	AKTIIVQLNESVEIN	1671.90	80.0%	69.3%
72 of 211	10/23/2022	15	IVQLNESVEINCTRP	1714.86	100.0%	88.0%
73 of 211	10/23/2022	15	NESVEINCTRPNNNT	1705.05	99.7%	86.4%
74 of 211	10/23/2022	15	EINCTRPNNNTRKSI	1759.83	86.9%	67.3%
75 of 211	10/23/2022	15	TRPNNNTRKSIHIGP	1705.14	96.7%	72.0%
76 of 211	10/23/2022	15	NNTRKSIHIGPGRAF	1667.97	100.0%	72.3%
77 of 211	10/23/2022	15	KSIHIGPGRAFYTGT	1604.90	84.2%	79.6%
78 of 211	10/23/2022	15	IGPGRAFYTGTGEIIG	1552.14	86.0%	76.3%
79 of 211	10/23/2022	15	RAFYTGTGEIIGDIRQ	1739.93	83.7%	86.1%
80 of 211	10/24/2022	15	TTGEIIGDIRQAHCN	1628.00	88.7%	73.2%
81 of 211	10/24/2022	15	IIGDIRQAHCNISRA	1667.16	100.0%	76.8%
82 of 211	10/24/2022	15	IRQAHCNISRAKWNN	1810.98	100.0%	76.0%
83 of 211	10/24/2022	15	HCNISRAKWNNLTKQ	1812.73	87.7%	76.1%
84 of 211	10/24/2022	15	SRAKWNNLTKQIVKK	1814.38	100.0%	67.8%
85 of 211	10/24/2022	15	WNNTLTKQIVKKLREQ	1898.42	98.6%	72.3%
86 of 211	10/24/2022	15	LKQIVKKLREQFGNK	1829.46	80.6%	68.6%
87 of 211	10/24/2022	15	VKKLREQFGNKTIVF	1807.33	100.0%	77.2%
88 of 211	10/24/2022	15	REQFGNKTIVFNQSS	1755.07	98.8%	66.9%
89 of 211	10/24/2022	15	GNKTIVFNQSSGGDP	1520.95	100.0%	80.9%
90 of 211	10/24/2022	15	IVFNQSSGGDPEIVM	1592.76	98.8%	87.7%
91 of 211	10/24/2022	15	QSSGGDPEIVMHSFN	1604.95	93.6%	83.1%
92 of 211	10/24/2022	15	GDPEIVMHSFNCGGE	1591.63	100.0%	84.4%
93 of 211	10/26/2022	15	IVMHSFNCGGEFFYC	1753.81	93.1%	79.0%
94 of 211	10/27/2022	15	SFNCGGEFFYCNTTQ	1717.49	82.5%	61.0%
95 of 211	10/24/2022	15	GGEFFYCNTTQLFNS	1728.11	100.0%	85.4%
96 of 211	10/24/2022	15	FYCNTTQLFNSTWNV	1838.15	97.8%	81.9%
97 of 211	10/24/2022	15	TTQLFNSTWNVNGTW	1768.88	81.5%	87.1%
98 of 211	10/24/2022	15	FNSTWNVNGTWNNT	1768.85	87.3%	86.2%
99 of 211	10/24/2022	15	WNVNGTWNNTTEGND	1734.88	93.7%	84.8%
100 of 211	10/24/2022	15	GTWNNTEGNDTITL	1650.27	100.0%	88.5%
101 of 211	10/24/2022	15	NNTEGNDTITLPCRI	1660.80	95.3%	81.7%
102 of 211	10/24/2022	15	GNDTITLPCRICKII	1685.22	96.6%	76.9%
103 of 211	10/24/2022	15	ITLPCRICKIINMWQ	1857.02	92.0%	84.5%
104 of 211	10/24/2022	15	CRICKIINMWQEVGK	1846.24	100.0%	79.1%
105 of 211	10/24/2022	15	QIINMWQEVGKAMYA	1782.30	86.9%	83.0%

Table 1: Peptide Analysis (continued)

Peptide	Date of Manufacturing	Length	Sequence	Molecular Weight (amu)	Purity by HPLC ^{1,2}	Peptide Content ³
106 of 211	10/24/2022	15	MWQEVGKAMYAPPIR	1777.26	97.0%	77.1%
107 of 211	10/24/2022	15	VGKAMYAPPIRGQIR	1657.15	90.0%	64.5%
108 of 211	10/24/2022	15	MYAPPIRGQIRCSSN	1692.83	96.5%	76.7%
109 of 211	10/24/2022	15	PIRGQIRCSSNITGL	1615.10	100.0%	77.5%
110 of 211	10/24/2022	15	QIRCSSNITGLLLTR	1674.94	98.3%	81.0%
111 of 211	10/24/2022	15	SSNITGLLLTRDGGN	1517.64	100.0%	84.4%
112 of 211	10/24/2022	15	TGLLLTRDGGNNNTN	1559.99	100.0%	82.0%
113 of 211	10/24/2022	15	LTRDGGNNNTNETEI	1647.96	95.1%	83.5%
114 of 211	10/24/2022	15	GGNNNTNETEIFRPG	1619.77	100.0%	80.9%
115 of 211	10/24/2022	15	NTNETEIFRPGGDM	1637.76	93.0%	86.0%
116 of 211	10/24/2022	15	TEIFRPGGDMRDNW	1750.99	91.2%	78.7%
117 of 211	10/24/2022	15	RPGGDMRDNRWSEL	1745.74	81.3%	77.5%
118 of 211	10/24/2022	15	GDMRDNRWSELYKYK	1960.87	84.1%	73.7%
119 of 211	10/24/2022	15	DNWRSELYKYKVVKI	1941.01	98.6%	78.8%
120 of 211	10/24/2022	15	SELYKYKVVKIEPLG	1766.04	93.4%	66.2%
121 of 211	10/24/2022	15	KYKVVKIEPLGVAPT	1642.00	98.7%	82.1%
122 of 211	10/24/2022	15	VKIEPLGVAPTKAKR	1607.18	100.0%	74.2%
123 of 211	10/24/2022	15	PLGVAPTKAKRRVVQ	1620.01	98.2%	79.8%
124 of 211	10/24/2022	15	APTKAKRRVVQREKR	1823.39	100.0%	69.7%
125 of 211	10/24/2022	15	AKRRVVQREKRAVGI	1766.33	94.3%	75.4%
126 of 211	10/24/2022	15	VVQREKRAVGIGAMF	1660.95	100.0%	79.9%
127 of 211	10/24/2022	15	EKRAVGIGAMFLGFL	1609.16	94.9%	85.6%
128 of 211	10/24/2022	15	VGIGAMFLGFLGAAG	1380.90	100.0%	75.9%
129 of 211	10/24/2022	15	AMFLGFLGAAGSTMG	1431.25	87.4%	92.3%
130 of 211	11/9/2022	15	GFLGAAGSTMGAASM	1328.69	98.2%	64.2%
131 of 211	10/24/2022	15	AAGSTMGAASMTLTV	1368.71	88.9%	83.0%
132 of 211	10/24/2022	15	TMGAASMTLVQARQ	1565.81	99.4%	84.4%
133 of 211	10/24/2022	15	ASMTLVQARQLLSG	1575.85	100.0%	74.2%
134 of 211	10/24/2022	15	LTVQARQLLSGIVQQ	1654.24	100.0%	86.7%
135 of 211	10/24/2022	15	ARQLLSGIVQQNNL	1681.97	86.1%	84.0%
136 of 211	10/24/2022	15	LSGIVQQNNLLRAI	1667.37	98.7%	85.0%
137 of 211	10/24/2022	15	VQQNNLLRAIEAQQ	1753.21	100.0%	89.2%
138 of 211	10/24/2022	15	NNLLRAIEAQHLLQ	1761.18	96.4%	80.7%
139 of 211	10/24/2022	15	RAIEAQHLLQLTVW	1806.39	95.6%	83.8%
140 of 211	10/24/2022	15	AQQHLLQLTVWGKIQ	1763.24	100.0%	79.0%
141 of 211	10/24/2022	15	LLQLTVWGKQLQAR	1767.33	86.1%	74.5%
142 of 211	10/24/2022	15	TVWGKQLQARVLAV	1682.32	100.0%	83.0%
143 of 211	10/24/2022	15	IKQLQARVLAVERYL	1800.37	85.8%	77.8%
144 of 211	10/24/2022	15	QARVLAVERYLKDQQ	1816.96	95.4%	69.0%
145 of 211	10/24/2022	15	LAVERYLKDQQLLGI	1759.32	80.8%	70.8%
146 of 211	10/24/2022	15	RYLKDQQLGIWGCS	1780.22	100.0%	87.4%
147 of 211	10/24/2022	15	DQQLGIWGCSGKLI	1631.11	100.0%	91.8%

Table 1: Peptide Analysis (continued)

Peptide	Date of Manufacturing	Length	Sequence	Molecular Weight (amu)	Purity by HPLC ^{1,2}	Peptide Content ³
148 of 211	10/24/2022	15	LGIWGC SGKLICTTT	1553.00	96.0%	87.9%
149 of 211	10/24/2022	15	GCSGKLICTTTVPWN	1579.76	100.0%	88.9%
150 of 211	10/24/2022	15	KLICTTTVPWNASWS	1707.92	99.2%	89.1%
151 of 211	10/24/2022	15	TTTVPWNASWSNKSL	1692.11	96.0%	82.8%
152 of 211	10/24/2022	15	PWNASWSNKSLDEIW	1833.22	95.2%	94.8%
153 of 211	10/24/2022	15	SWSNKSLDEIWDNMT	1826.04	95.9%	94.5%
154 of 211	10/24/2022	15	KSLDEIWDNMTWMEW	1984.83	100.0%	85.0%
155 of 211	10/24/2022	15	EIWDNMTWMEWEREI	2067.97	92.8%	93.0%
156 of 211	10/24/2022	15	NMTWMEWEREIDNYT	2018.54	100.0%	91.0%
157 of 211	10/24/2022	15	MEWEREIDNYTSLIY	1961.94	93.8%	91.1%
158 of 211	10/26/2022	15	REIDNYTSLIYTLIE	1843.45	100.0%	84.7%
159 of 211	10/24/2022	15	NYTSLIYTLIEESQN	1788.42	100.0%	83.5%
160 of 211	10/27/2022	15	LIYTLIEESQNQQEK	1836.19	97.9%	82.8%
161 of 211	10/24/2022	15	LIEESQNQQEKNEQE	1845.57	97.0%	92.9%
162 of 211	10/24/2022	15	SQNQQEKNEQELLEL	1829.95	93.8%	73.2%
163 of 211	10/27/2022	15	QEKNEQELLELDKWA	1873.38	98.7%	68.0%
164 of 211	10/24/2022	15	EQELLELDKWASLWN	1873.91	100.0%	95.4%
165 of 211	10/27/2022	15	LELDKWASLWNWFDI	1936.34	100.0%	86.1%
166 of 211	10/25/2022	15	KWASLWNWFDITNWL	1980.90	93.7%	88.2%
167 of 211	10/27/2022	15	LWNWFDITNWLWYIK	2098.18	100.0%	66.6%
168 of 211	10/27/2022	15	FDITNWLWYIKIFIM	2003.46	100.0%	82.9%
169 of 211	11/3/2022	15	NWLWYIKIFIMIVGG	1853.30	100.0%	80.3%
170 of 211	11/21/2022	15	YIKIFIMIVGGLIGL	1650.0	80.0%	66.3%
171 of 211	10/27/2022	15	FIMIVGGLIGLRIVF	1647.00	80.0%	71.1%
172 of 211	10/27/2022	15	VGGLIGLRIVFAVLS	1514.90	80.0%	85.1%
173 of 211	10/27/2022	15	IGLRIVFAVLSIVNR	1670.33	96.6%	76.9%
174 of 211	10/27/2022	15	IVFAVLSIVNRVRQG	1671.05	81.5%	81.3%
175 of 211	10/27/2022	15	VLSIVNRVRQGYSP	1701.00	83.2%	90.6%
176 of 211	10/27/2022	15	VNRVRQGYSPFSFQT	1751.85	98.3%	86.4%
177 of 211	10/27/2022	15	RQGYSPFSFQTRLPA	1720.87	92.6%	85.4%
178 of 211	10/27/2022	15	SPLSFQTRLPAPRGP	1624.12	98.4%	62.0%
179 of 211	10/27/2022	15	FQTRLPAPRGPDRPE	1737.13	100.0%	65.7%
180 of 211	10/27/2022	15	LPAPRGPDRPEGIEE	1633.05	97.0%	83.9%
181 of 211	10/27/2022	15	RGPDRPEGIEEEEGE	1626.76	98.9%	69.9%
182 of 211	10/27/2022	15	RPEGIEEEGERDRD	1744.02	100.0%	74.5%
183 of 211	10/25/2022	15	IEEEGERDRDRSGR	1760.81	91.4%	70.8%
184 of 211	10/25/2022	15	GGERDRDRSGRLVDG	1644.93	92.9%	67.0%
185 of 211	10/25/2022	15	DRDRSGRLVDGFLAL	1689.98	99.2%	73.5%
186 of 211	10/25/2022	15	SGRLVDGFLALIWDD	1677.06	86.5%	69.7%
187 of 211	10/25/2022	15	VDGFLALIWDDLRLSL	1732.79	97.9%	90.9%
188 of 211	10/25/2022	15	LALIWDDLRLSLCLFS	1764.93	92.7%	87.6%
189 of 211	10/25/2022	15	WDDLRLSLCLFSYHRL	1923.85	97.8%	86.5%

Table 1: Peptide Analysis (continued)

Peptide	Date of Manufacturing	Length	Sequence	Molecular Weight (amu)	Purity by HPLC ^{1,2}	Peptide Content ³
190 of 211	10/25/2022	15	RSLCLFSYHRLRDLL	1892.35	100.0%	81.9%
191 of 211	10/25/2022	15	LFSYHRLRDLLIVT	1859.45	94.4%	73.4%
192 of 211	10/25/2022	15	HRLRDLLIVTRIVE	1846.45	100.0%	61.1%
193 of 211	10/25/2022	15	DLLIVTRIVELLGR	1722.91	82.1%	70.8%
194 of 211	10/25/2022	15	IVTRIVELLGRRGWE	1797.32	94.2%	88.8%
195 of 211	10/25/2022	15	IVELLGRRGWEVLKY	1831.41	80.9%	87.5%
196 of 211	10/25/2022	15	LGRRGWEVLKYWWNL	1976.12	95.8%	90.5%
197 of 211	10/25/2022	15	GWEVLKYWWNLLQYW	2085.04	87.6%	94.2%
198 of 211	10/25/2022	15	LKYWWNLLQYWSQEL	2070.46	94.8%	95.1%
199 of 211	10/25/2022	15	WNLLQYWSQELKNSA	1880.25	100.0%	90.3%
200 of 211	10/27/2022	15	QYWSQELKNSAVSLL	1766.29	100.0%	64.6%
201 of 211	10/25/2022	15	QELKNSAVSLLNATA	1559.25	100.0%	89.2%
202 of 211	10/25/2022	15	NSAVSLLNATAIAVA	1415.00	80.0%*	81.3%
203 of 211	11/8/2022	15	SLLNATAIAVAEGTD	1445.83	90.4%	66.2%
204 of 211	10/25/2022	15	ATAIAVAEGTDRVIE	1515.66	97.8%	81.3%
205 of 211	10/25/2022	15	AVAEGTDRVIEVVQR	1642.10	92.3%	82.5%
206 of 211	10/25/2022	15	GTDRVIEVVQRACRA	1673.08	100.0%	80.7%
207 of 211	10/25/2022	15	VIEVVQRACRAILHI	1720.00	100.0%	83.1%
208 of 211	10/25/2022	15	VQRACRAILHIPRRI	1802.39	100.0%	70.5%
209 of 211	10/25/2022	15	CRAILHIPRRIRQGL	1802.07	85.5%	76.4%
210 of 211	10/26/2022	15	LHIPRRIRQGLERAL	1828.17	91.5%	70.5%
211 of 211	10/25/2022	12	RRIRQGLERALL	1480.92	100.0%	75.1%

¹Percent full-length peptide. HPLC peaks for both target and pyroglutamyl (pGlu) forms of Peptides 21, 29, 43, 91, 105, 144, 163 and 200 were counted for final purity.

²Peptides 4, 5, 71, 72, 169, 170, 171, 172, 193 and 202 were unable to be purified on a column due to high hydrophobicity and poor solubility; all material was dialyzed. HPLC analysis was inconclusive for Peptides 5 and 202 due to the hydrophobic nature of the sequence; purity is based on mass spectral analysis.

³Remainder is salt and water

Figure 1: Amino Acid Analysis⁴

Peptide		Ala (A)	Arg (R)	Asx (N,D)	Glx (Q,E)	Gly (G)	His (H)	Ile (I)	Leu (L)	Lys (K)	Phe (F)	Pro (P)	Tyr (Y)	Val (V)
1 of 211	Expected		3.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00				1.00
	Actual		2.84	0.99	1.01	1.02	1.03	0.99	1.03	1.99				0.98
2 of 211	Expected		2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00				
	Actual		1.94	1.01	1.02	2.05	1.03	1.02	1.05	1.03				
3 of 211	Expected		1.00	1.00	1.00	2.00	1.00		3.00					
	Actual		0.96	1.00	1.03	2.10	1.05		3.16					
4 of 211	Expected		1.00			2.00		1.00	4.00					
	Actual		0.94			1.97		1.06	4.04					
5 of 211	Expected	2.00			1.00	2.00		1.00	3.00					
	Actual	2.09			1.00	1.94		0.98	2.99					
6 of 211	Expected	2.00			1.00	1.00		1.00	3.00	1.00				1.00
	Actual	2.05			1.01	0.99		0.94	2.96	1.02				1.03
7 of 211	Expected	2.00			1.00			1.00	1.00	1.00				2.00
	Actual	2.00			0.98			0.95	1.06	0.99				2.01
8 of 211	Expected	2.00			1.00	1.00			1.00	1.00		1.00		4.00
	Actual	2.00			0.99	0.97			1.05	0.99		1.00		3.96

Figure 1: Amino Acid Analysis (continued)⁴

Peptide		Ala (A)	Arg (R)	Asx (N,D)	Glx (Q,E)	Gly (G)	His (H)	Ile (I)	Leu (L)	Lys (K)	Phe (F)	Pro (P)	Tyr (Y)	Val (V)
9 of 211	Expected	1.00			1.00	1.00			1.00	1.00		1.00		4.00
	Actual	1.03			0.99	1.00			1.01	1.00		0.99		3.93
10 of 211	Expected	1.00			1.00	1.00			1.00	1.00		1.00		3.00
	Actual	1.02			0.99	1.00			1.02	1.00		0.99		2.94
11 of 211	Expected	2.00			1.00				1.00	1.00	1.00	1.00		2.00
	Actual	2.03			0.99				1.05	0.99	0.99	0.99		1.95
12 of 211	Expected	4.00		1.00	1.00				1.00	2.00	1.00			
	Actual	4.05		1.04	0.93				1.06	1.94	0.99			
13 of 211	Expected	3.00		2.00	1.00				1.00	1.00	1.00			
	Actual	3.17		2.08	0.81				1.10	1.04	1.05			
14 of 211	Expected	3.00		3.00	1.00		1.00			1.00				2.00
	Actual	3.06		3.10	1.04		1.03			1.04				2.05
15 of 211	Expected	3.00		2.00	1.00		2.00			1.00				2.00
	Actual	3.07		2.04	1.03		2.10			1.00				2.05
16 of 211	Expected	2.00		2.00	1.00		2.00					1.00		3.00
	Actual	2.03		1.99	1.01		2.00					1.00		2.96
17 of 211	Expected	2.00		3.00			2.00					2.00		2.00
	Actual	2.28		2.69			1.83					1.96		2.24
18 of 211	Expected	2.00		2.00	2.00		1.00					3.00		2.00
	Actual	2.00		2.02	2.02		1.00					2.96		2.00
19 of 211	Expected			3.00	3.00				1.00			3.00		3.00
	Actual			3.05	3.01				1.04			2.97		2.85
20 of 211	Expected			4.00	4.00				1.00			2.00		3.00
	Actual			4.05	4.04				1.02			1.99		2.90
21 of 211	Expected			3.00	4.00				1.00		1.00			3.00
	Actual			3.09	3.84				1.01		1.07			2.81
22 of 211	Expected			5.00	2.00				1.00	1.00	1.00			1.00
	Actual			4.86	2.02				1.01	1.02	0.98			1.01
23 of 211	Expected			4.00	3.00					1.00	1.00			1.00
	Actual			3.98	3.02					1.01	1.00			0.99
24 of 211	Expected			4.00	3.00		1.00	1.00		1.00				1.00
	Actual			3.88	3.02		0.97	1.03		1.01				1.01
25 of 211	Expected			3.00	3.00		1.00	2.00	1.00					1.00
	Actual			2.89	3.07		0.98	1.90	1.06					1.02
26 of 211	Expected			2.00	4.00		1.00	2.00	2.00					
	Actual			2.02	4.13		1.00	1.85	2.06					
27 of 211	Expected			2.00	2.00			2.00	2.00	1.00		1.00		1.00
	Actual			2.01	2.02			1.78	2.06	1.03		1.01		1.03
28 of 211	Expected			1.00	1.00				3.00	2.00		2.00		1.00
	Actual			0.96	1.00				3.05	2.05		1.97		1.02
29 of 211	Expected				1.00				3.00	2.00		2.00		2.00
	Actual				0.93				3.07	2.05		2.00		2.05
30 of 211	Expected			1.00					3.00	1.00		2.00		2.00
	Actual			1.00					3.07	1.00		1.98		1.98
31 of 211	Expected			3.00					4.00			1.00		1.00
	Actual			2.88					3.95			1.01		1.04
32 of 211	Expected	1.00		4.00					2.00					1.00
	Actual	1.05		3.77					2.03					1.00
33 of 211	Expected	1.00		5.00					1.00					
	Actual	1.06		4.76					0.99					

Figure 1: Amino Acid Analysis (continued)⁴

Peptide		Ala (A)	Arg (R)	Asx (N,D)	Glx (Q,E)	Gly (G)	His (H)	Ile (I)	Leu (L)	Lys (K)	Phe (F)	Pro (P)	Tyr (Y)	Val (V)
34 of 211	Expected	1.00		3.00	1.00	1.00			1.00	1.00				
	Actual	1.09		3.04	0.90	1.04			1.01	0.95				
35 of 211	Expected			2.00	2.00	2.00				2.00				
	Actual			2.03	2.00	2.01				1.96				
36 of 211	Expected			2.00	3.00	2.00		1.00		3.00				
	Actual			1.87	2.91	2.10		1.01		3.10				
37 of 211	Expected			2.00	3.00	2.00		1.00		3.00	1.00			
	Actual			1.99	2.98	2.04		1.00		3.05	0.97			
38 of 211	Expected			2.00	2.00	1.00		2.00	0.00	2.00	1.00			
	Actual			2.01	1.94	1.04		1.98	0.00	2.00	1.00			
39 of 211	Expected		1.00	3.00				3.00		2.00	1.00			
	Actual		0.93	3.07				3.03		2.07	0.99			
40 of 211	Expected		1.00	2.00	2.00			2.00		2.00	1.00			1.00
	Actual		1.00	2.09	1.91			2.09		1.95	0.98			1.00
41 of 211	Expected	1.00	1.00	1.00	2.00			1.00	1.00	2.00	1.00			1.00
	Actual	1.03	0.95	1.01	2.05			0.98	0.98	2.05	0.96			1.03
42 of 211	Expected	1.00	1.00	2.00	2.00				2.00	3.00	1.00			1.00
	Actual	1.03	1.01	1.93	2.03				1.93	2.95	1.01			1.02
43 of 211	Expected	1.00		1.00	2.00			1.00	2.00	2.00	1.00	1.00		2.00
	Actual	1.03		1.01	1.92			1.01	2.04	2.04	1.00	1.01		1.89
44 of 211	Expected	1.00		5.00				1.00	2.00	1.00	1.00	1.00		2.00
	Actual	1.02		5.01				0.99	2.04	1.03	0.97	1.01		1.94
45 of 211	Expected			5.00				1.00	1.00	1.00		1.00		2.00
	Actual			5.01				1.00	1.02	1.04		1.01		1.93
46 of 211	Expected		1.00	4.00				2.00	1.00			1.00		1.00
	Actual		1.07	4.17				2.01	1.12			1.03		1.03
47 of 211	Expected		1.00	4.00				1.00	1.00					
	Actual		1.00	4.43				1.20	1.17					
48 of 211	Expected		1.00	1.00	1.00			2.00	1.00					1.00
	Actual		0.94	1.05	1.07			2.07	1.06					1.01
49 of 211	Expected	1.00		1.00	1.00			2.00	1.00	1.00		1.00		1.00
	Actual	1.05		1.00	1.00			1.90	1.05	1.01		0.99		0.96
50 of 211	Expected	1.00		1.00	2.00			1.00		1.00	1.00	1.00		2.00
	Actual	1.07		0.93	2.05			0.93		1.06	0.99	1.00		2.00
51 of 211	Expected	1.00			2.00			3.00		1.00	1.00	3.00		1.00
	Actual	1.05			2.00			2.86		1.02	0.98	3.00		1.00
52 of 211	Expected	1.00			1.00		1.00	2.00		1.00	1.00	3.00		1.00
	Actual	1.02			1.01		1.00	2.06		0.98	0.99	2.95		1.00
53 of 211	Expected	2.00			1.00	1.00	1.00	2.00			2.00	3.00		
	Actual	2.06			1.01	1.00	0.98	2.04			1.95	2.97		
54 of 211	Expected	3.00				1.00	1.00	3.00	1.00	1.00	1.00	2.00		
	Actual	3.01				1.16	0.96	2.88	1.07	1.03	0.99	1.95		
55 of 211	Expected	3.00		2.00		1.00		1.00	1.00	2.00	1.00	1.00		
	Actual	2.99		2.01		1.00		1.02	1.04	2.00	0.98	0.96		
56 of 211	Expected	2.00		3.00		2.00		1.00	1.00	3.00	2.00			
	Actual	2.08		2.95		1.96		1.01	1.04	3.01	1.88			
57 of 211	Expected			3.00		2.00		1.00	1.00	3.00	1.00	1.00		
	Actual			3.01		2.14		0.95	1.03	3.00	0.99	1.07		
58 of 211	Expected			4.00		2.00				2.00	1.00	1.00		1.00
	Actual			4.02		2.07				2.02	0.95	1.00		0.99

Figure 1: Amino Acid Analysis (continued)⁴

Peptide		Ala (A)	Arg (R)	Asx (N,D)	Glx (Q,E)	Gly (G)	His (H)	Ile (I)	Leu (L)	Lys (K)	Phe (F)	Pro (P)	Tyr (Y)	Val (V)
59 of 211	Expected			2.00	1.00	2.00					1.00	1.00		2.00
	Actual			1.96	1.09	1.97					0.87	0.99		2.18
60 of 211	Expected			1.00	1.00	2.00	1.00	1.00				1.00		2.00
	Actual			1.01	1.00	2.01	1.00	1.00				0.99		1.99
61 of 211	Expected		1.00	1.00	1.00	1.00	1.00	1.00				1.00		4.00
	Actual		0.95	0.98	1.00	1.05	1.00	1.00				1.05		3.90
62 of 211	Expected		1.00		2.00	1.00	1.00	1.00	1.00			1.00		3.00
	Actual		0.97		2.03	1.02	1.00	0.99	1.02			1.01		2.95
63 of 211	Expected		1.00	1.00	1.00	2.00	1.00	1.00	3.00			1.00		2.00
	Actual		0.98	0.99	1.04	1.98	1.01	0.99	3.05			1.00		1.97
64 of 211	Expected	1.00		1.00	2.00	1.00			4.00			1.00		2.00
	Actual	1.05		1.01	1.99	0.99			4.03			0.99		1.92
65 of 211	Expected	1.00		1.00	4.00	1.00			4.00					2.00
	Actual	1.04		0.99	4.00	1.00			3.98					1.95
66 of 211	Expected	1.00	1.00	1.00	4.00	1.00		1.00	2.00					2.00
	Actual	1.04	0.98	0.99	4.05	1.02		0.98	2.01					1.94
67 of 211	Expected	1.00	1.00	2.00	4.00			1.00	1.00		1.00			2.00
	Actual	1.03	1.02	2.01	3.97			0.99	0.99		0.99			1.95
68 of 211	Expected	1.00	1.00	3.00	2.00			1.00		1.00	1.00			2.00
	Actual	1.06	1.00	3.10	1.99			0.96		1.02	0.98			1.89
69 of 211	Expected	1.00	1.00	3.00	2.00			2.00		1.00	1.00			1.00
	Actual	1.06	0.98	2.96	2.00			1.93		1.03	0.97			1.01
70 of 211	Expected	1.00		3.00	2.00			2.00	1.00	1.00	1.00			1.00
	Actual	1.05		2.99	2.01			1.91	1.03	1.01	0.96			1.00
71 of 211	Expected	1.00		2.00	3.00			3.00	1.00	1.00				2.00
	Actual	0.92		2.15	3.13			2.74	1.05	0.80				2.00
72 of 211	Expected		1.00	2.00	3.00			2.00	1.00			1.00		2.00
	Actual		0.96	2.05	3.02			1.85	1.08			1.04		1.95
73 of 211	Expected		1.00	5.00	2.00			1.00				1.00		1.00
	Actual		0.98	5.05	2.00			0.99				1.00		1.01
74 of 211	Expected		2.00	4.00	1.00			2.00		1.00		1.00		
	Actual		2.03	4.03	0.96			1.95		1.07		0.99		
75 of 211	Expected		2.00	3.00		1.00	1.00	2.00		1.00		2.00		
	Actual		1.94	3.04		1.02	1.00	1.96		1.03		1.98		
76 of 211	Expected	1.00	2.00	2.00		2.00	1.00	2.00		1.00	1.00	1.00		
	Actual	1.06	1.95	2.01		2.01	1.01	1.98		1.03	0.99	0.94		
77 of 211	Expected	1.00	1.00			3.00	1.00	2.00		1.00	1.00	1.00		
	Actual	1.06	0.96			3.07	0.98	2.02		1.01	1.01	0.95		
78 of 211	Expected	1.00	1.00		1.00	4.00		3.00			1.00	1.00		
	Actual	1.07	0.96		1.04	3.96		2.89			1.03	0.95		
79 of 211	Expected	1.00	2.00	1.00	2.00	2.00		3.00			1.00			
	Actual	1.11	2.00	1.04	2.03	2.12		3.02			1.05			
80 of 211	Expected	1.00	1.00	2.00	2.00	2.00	1.00	3.00						
	Actual	1.02	0.99	1.94	2.01	2.07	0.98	2.97						
81 of 211	Expected	2.00	2.00	2.00	1.00	1.00	1.00	4.00						
	Actual	1.81	1.71	2.08	1.05	1.08	1.09	3.94						
82 of 211	Expected	2.00	2.00	3.00	1.00		1.00	2.00		1.00				
	Actual	2.07	1.92	2.93	0.99		1.04	1.96		1.02				
83 of 211	Expected	1.00	1.00	3.00	1.00		1.00	1.00	1.00	2.00				
	Actual	1.09	0.99	2.91	0.91		1.06	0.99	1.00	1.98				

Figure 1: Amino Acid Analysis (continued)⁴

Peptide		Ala (A)	Arg (R)	Asx (N,D)	Glx (Q,E)	Gly (G)	His (H)	Ile (I)	Leu (L)	Lys (K)	Phe (F)	Pro (P)	Tyr (Y)	Val (V)
84 of 211	Expected	1.00	1.00	2.00	1.00			1.00	1.00	4.00				1.00
	Actual	1.07	0.98	2.00	1.01			0.96	1.02	4.04				0.95
85 of 211	Expected		1.00	2.00	3.00			1.00	2.00	3.00				1.00
	Actual		0.99	1.97	3.05			0.99	2.03	3.09				0.98
86 of 211	Expected		1.00	1.00	3.00	1.00		1.00	2.00	4.00	1.00			1.00
	Actual		1.01	0.95	3.08	1.06		0.95	2.03	4.02	1.02			0.97
87 of 211	Expected		1.00	1.00	2.00	1.00		1.00	1.00	3.00	2.00			2.00
	Actual		0.98	0.99	2.00	1.02		0.98	1.01	3.04	2.00			2.00
88 of 211	Expected		1.00	2.00	3.00	1.00		1.00		1.00	2.00			1.00
	Actual		0.96	1.99	2.95	1.05		0.98		1.03	2.00			1.00
89 of 211	Expected			3.00	1.00	3.00		1.00		1.00	1.00	1.00		1.00
	Actual			2.78	1.01	3.09		0.99		1.03	1.01	1.01		1.00
90 of 211	Expected			2.00	2.00	2.00		2.00			1.00	1.00		2.00
	Actual			2.03	2.03	2.09		1.88			1.01	1.03		1.90
91 of 211	Expected			2.00	2.00	2.00	1.00	1.00			1.00	1.00		1.00
	Actual			2.01	1.94	2.06	1.02	0.98			0.97	1.02		1.00
92 of 211	Expected			2.00	2.00	3.00	1.00	1.00			1.00	1.00		1.00
	Actual			2.00	1.99	3.00	1.03	0.96			1.02	1.00		0.99
93 of 211	Expected			1.00	1.00	2.00	1.00	1.00			3.00		1.00	1.00
	Actual			1.11	1.21	2.40	0.99	0.98			3.57		0.43	0.91
94 of 211	Expected			2.00	2.00	2.00					3.00			
	Actual			2.04	1.88	2.12					3.11			
95 of 211	Expected			2.00	2.00	2.00			1.00		3.00		1.00	
	Actual			1.94	2.01	2.00			1.03		2.99		0.49	
96 of 211	Expected			3.00	1.00				1.00		2.00		1.00	1.00
	Actual			3.07	1.05				1.07		2.03		0.47	1.03
97 of 211	Expected			3.00	1.00	1.00			1.00		1.00			1.00
	Actual			2.95	0.98	1.04			1.02		0.97			1.01
98 of 211	Expected			6.00		1.00					1.00			1.00
	Actual			5.86		1.04					0.96			1.03
99 of 211	Expected			7.00	1.00	2.00								1.00
	Actual			6.79	1.02	2.04								0.99
100 of 211	Expected			5.00	1.00	2.00		1.00	1.00					
	Actual			4.81	0.98	2.03		1.01	1.03					
101 of 211	Expected		1.00	4.00	1.00	1.00		2.00	1.00			1.00		
	Actual		0.93	3.97	1.00	1.04		1.96	1.04			1.01		
102 of 211	Expected		1.00	2.00	1.00	1.00		4.00	1.00	1.00		1.00		
	Actual		0.90	1.96	1.02	1.01		4.07	1.05	1.04		0.99		
103 of 211	Expected		1.00	1.00	2.00			4.00	1.00	1.00		1.00		
	Actual		0.92	1.05	1.91			3.97	1.09	1.00		0.99		
104 of 211	Expected		1.00	1.00	3.00	1.00		3.00		2.00				1.00
	Actual		0.94	1.02	3.00	1.02		3.02		2.01				1.01
105 of 211	Expected	2.00		1.00	3.00	1.00		2.00		1.00				1.00
	Actual	1.97		1.01	2.97	1.00		2.02		1.00				1.01
106 of 211	Expected	2.00	1.00		2.00	1.00		1.00		1.00		2.00		1.00
	Actual	2.08	0.89		2.00	1.02		1.01		1.04		1.95		1.02
107 of 211	Expected	2.00	2.00		1.00	2.00		2.00		1.00		2.00		1.00
	Actual	2.12	1.84		0.94	2.02		1.94		1.06		2.03		1.02
108 of 211	Expected	1.00	2.00	1.00	1.00	1.00		2.00				2.00		
	Actual	1.09	1.90	0.94	1.01	1.04		2.09				2.03		

Figure 1: Amino Acid Analysis (continued)⁴

Peptide		Ala (A)	Arg (R)	Asx (N,D)	Glx (Q,E)	Gly (G)	His (H)	Ile (I)	Leu (L)	Lys (K)	Phe (F)	Pro (P)	Tyr (Y)	Val (V)
109 of 211	Expected		2.00	1.00	1.00	2.00		3.00	1.00			1.00		
	Actual		1.87	1.02	1.01	2.05		2.98	1.00			1.01		
110 of 211	Expected		2.00	1.00	1.00	1.00		2.00	3.00					
	Actual		1.89	1.01	0.99	1.04		1.99	3.08					
111 of 211	Expected		1.00	3.00		3.00		1.00	3.00					
	Actual		0.95	2.98		3.09		1.00	3.08					
112 of 211	Expected		1.00	5.00		3.00			3.00					
	Actual		0.98	4.77		3.09			3.11					
113 of 211	Expected		1.00	5.00	2.00	2.00		1.00	1.00					
	Actual		0.86	5.06	2.18	2.02		1.10	0.92					
114 of 211	Expected		1.00	4.00	2.00	3.00		1.00			1.00	1.00		
	Actual		0.99	3.89	1.99	3.03		1.03			1.02	0.97		
115 of 211	Expected		1.00	3.00	2.00	3.00		1.00			1.00	1.00		
	Actual		0.95	3.06	2.04	3.04		1.02			1.01	0.97		
116 of 211	Expected		2.00	3.00	1.00	3.00		1.00			1.00	1.00		
	Actual		1.91	3.02	1.02	3.12		1.00			1.00	0.97		
117 of 211	Expected		3.00	3.00	1.00	3.00			1.00			1.00		
	Actual		2.83	2.98	1.02	3.03			1.03			1.00		
118 of 211	Expected		2.00	3.00	1.00	1.00			1.00	2.00				
	Actual		1.85	2.97	1.02	1.02			1.04	2.00				
119 of 211	Expected		1.00	2.00	1.00			1.00	1.00	3.00				2.00
	Actual		0.93	1.92	1.01			1.03	1.03	3.07				2.03
120 of 211	Expected				2.00	1.00		1.00	2.00	3.00		1.00		2.00
	Actual				1.96	1.03		1.02	1.98	3.02		0.98		1.99
121 of 211	Expected	1.00			1.00	1.00		1.00	1.00	3.00		2.00		3.00
	Actual	1.03			0.99	1.00		0.99	1.01	2.98		1.99		2.96
122 of 211	Expected	2.00	1.00		1.00	1.00		1.00	1.00	3.00		2.00		2.00
	Actual	2.03	0.95		1.01	1.03		0.99	1.02	3.03		1.99		1.98
123 of 211	Expected	2.00	2.00		1.00	1.00			1.00	2.00		2.00		3.00
	Actual	2.06	1.97		0.97	1.02			1.01	2.04		2.01		2.92
124 of 211	Expected	2.00	4.00		2.00					3.00		1.00		2.00
	Actual	2.07	3.82		1.98					2.99		1.01		2.03
125 of 211	Expected	2.00	4.00		2.00	1.00		1.00		2.00				3.00
	Actual	2.01	3.56		2.06	1.19		1.13		1.97				2.86
126 of 211	Expected	2.00	2.00		2.00	2.00		1.00		1.00	1.00			3.00
	Actual	2.06	1.94		2.01	2.01		1.00		1.03	0.96			3.01
127 of 211	Expected	2.00	1.00		1.00	3.00		1.00	2.00	1.00	2.00			1.00
	Actual	2.02	0.96		0.96	3.08		1.02	2.08	1.04	1.87			1.02
128 of 211	Expected	3.00				5.00		1.00	2.00		2.00			1.00
	Actual	3.05				4.98		1.01	2.06		1.85			1.02
129 of 211	Expected	3.00				4.00			2.00		2.00			
	Actual	3.03				3.93			2.11		1.91			
130 of 211	Expected	4.00				4.00			1.00		1.00			
	Actual	4.44				4.28			0.94		0.88			
131 of 211	Expected	4.00				2.00			1.00					1.00
	Actual	3.87				1.96			1.05					1.00
132 of 211	Expected	3.00	1.00		2.00	1.00			1.00					1.00
	Actual	3.04	0.89		1.99	1.00			1.08					1.02
133 of 211	Expected	2.00	1.00		2.00	1.00			3.00					1.00
	Actual	2.05	0.93		1.99	1.03			3.04					1.00

Figure 1: Amino Acid Analysis (continued)⁴

Peptide		Ala (A)	Arg (R)	Asx (N,D)	Glx (Q,E)	Gly (G)	His (H)	Ile (I)	Leu (L)	Lys (K)	Phe (F)	Pro (P)	Tyr (Y)	Val (V)
134 of 211	Expected	1.00	1.00		4.00	1.00		1.00	3.00					2.00
	Actual	1.05	0.95		3.96	1.02		0.98	3.04					2.01
135 of 211	Expected	1.00	1.00	2.00	4.00	1.00		1.00	3.00					1.00
	Actual	1.04	0.95	1.99	4.02	1.01		0.98	3.02					1.00
136 of 211	Expected	1.00	1.00	2.00	3.00	1.00		2.00	3.00					1.00
	Actual	1.06	0.97	1.98	2.98	1.00		1.98	3.02					0.99
137 of 211	Expected	2.00	1.00	2.00	6.00			1.00	2.00					1.00
	Actual	2.02	0.98	1.99	5.89			1.00	2.04					1.01
138 of 211	Expected	2.00	1.00	2.00	4.00		1.00	1.00	4.00					
	Actual	2.06	0.98	1.96	4.00		1.02	0.99	4.01					
139 of 211	Expected	2.00	1.00		4.00		1.00	1.00	3.00					1.00
	Actual	2.06	0.97		4.02		1.01	0.98	3.03					1.00
140 of 211	Expected	1.00			4.00	1.00	1.00	1.00	3.00	1.00				1.00
	Actual	1.03			3.94	0.98	1.01	0.98	3.00	1.00				1.00
141 of 211	Expected	1.00	1.00		3.00	1.00		1.00	4.00	1.00				1.00
	Actual	0.99	0.88		2.87	1.08		1.00	3.89	1.03				1.08
142 of 211	Expected	2.00	1.00		2.00	1.00		1.00	2.00	1.00				3.00
	Actual	2.09	0.97		1.98	0.99		0.97	2.05	1.00				3.01
143 of 211	Expected	2.00	2.00		3.00			1.00	3.00	1.00				2.00
	Actual	2.34	2.27		2.99			0.88	3.22	0.92				2.29
144 of 211	Expected	2.00	2.00	1.00	4.00				2.00	1.00			1.00	2.00
	Actual	2.07	1.92	1.00	3.93				2.03	1.01			0.58	2.00
145 of 211	Expected	1.00	1.00	1.00	3.00	1.00		1.00	4.00	1.00			1.00	1.00
	Actual	0.94	0.85	1.11	3.13	1.15		1.11	4.27	1.13			0.55	0.89
146 of 211	Expected		1.00	1.00	2.00	2.00		1.00	3.00	1.00				
	Actual		0.94	0.99	1.99	2.01		1.04	3.02	1.02				
147 of 211	Expected			1.00	2.00	3.00		2.00	3.00	1.00				
	Actual			0.94	1.90	3.19		1.98	2.99	1.05				
148 of 211	Expected					3.00		2.00	2.00	1.00				
	Actual					2.97		1.97	2.05	1.00				
149 of 211	Expected			1.00		2.00		1.00	1.00	1.00		1.00		1.00
	Actual			0.98		1.98		0.99	1.05	1.00		1.00		1.00
150 of 211	Expected	1.00		1.00				1.00	1.00	1.00		1.00		1.00
	Actual	1.09		0.96				0.98	1.03	0.99		0.98		0.99
151 of 211	Expected	1.00		2.00					1.00	1.00		1.00		1.00
	Actual	1.09		1.93					1.00	0.99		0.97		1.00
152 of 211	Expected	1.00		3.00	1.00			1.00	1.00	1.00		1.00		
	Actual	1.11		2.84	0.98			0.97	1.02	1.00		0.96		
153 of 211	Expected			4.00	1.00			1.00	1.00	1.00				
	Actual			3.92	0.99			0.98	1.04	1.02				
154 of 211	Expected			3.00	2.00			1.00	1.00	1.00				
	Actual			2.90	1.97			1.00	1.06	0.99				
155 of 211	Expected		1.00	2.00	4.00			2.00						
	Actual		0.99	1.96	4.04			2.05						
156 of 211	Expected		1.00	3.00	3.00			1.00						
	Actual		1.02	3.10	3.10			1.07						
157 of 211	Expected		1.00	2.00	3.00			2.00	1.00					
	Actual		0.98	2.08	3.02			2.10	1.08					
158 of 211	Expected		1.00	2.00	2.00			3.00	2.00					
	Actual		1.00	2.07	2.07			3.09	2.09					

Figure 1: Amino Acid Analysis (continued)⁴

Peptide		Ala (A)	Arg (R)	Asx (N,D)	Glx (Q,E)	Gly (G)	His (H)	Ile (I)	Leu (L)	Lys (K)	Phe (F)	Pro (P)	Tyr (Y)	Val (V)
159 of 211	Expected			2.00	3.00			2.00	2.00					
	Actual			1.97	3.06			2.13	2.15					
160 of 211	Expected			1.00	6.00			2.00	2.00	1.00				
	Actual			1.04	6.16			2.01	2.06	1.07				
161 of 211	Expected			2.00	9.00			1.00	1.00	1.00				
	Actual			1.97	8.94			1.00	1.01	1.01				
162 of 211	Expected			2.00	8.00				3.00	1.00				
	Actual			1.97	7.95				3.01	1.02				
163 of 211	Expected	1.00		2.00	6.00				3.00	2.00				
	Actual	1.01		1.98	5.91				3.04	2.00				
164 of 211	Expected	1.00		2.00	4.00				4.00	1.00				
	Actual	1.05		1.96	3.85				4.03	1.00				
165 of 211	Expected	1.00		3.00	1.00			1.00	3.00	1.00	1.00			
	Actual	1.03		2.94	1.00			0.97	3.06	1.01	0.99			
166 of 211	Expected	1.00		3.00				1.00	2.00	1.00	1.00			
	Actual	1.05		2.95				1.04	2.08	0.89	1.00			
167 of 211	Expected			3.00				2.00	2.00	1.00	1.00			
	Actual			2.92				2.18	2.04	1.06	1.05			
168 of 211	Expected			2.00				4.00	1.00	1.00	2.00		1.00	
	Actual			2.05				3.92	1.05	0.97	1.96		0.67	
169 of 211	Expected			1.00		2.00		4.00	1.00	1.00	1.00		1.00	1.00
	Actual			1.00		2.29		3.87	1.07	0.94	1.01		0.80	1.00
170 of 211	Expected					3.00		5.00	2.00	1.00	1.00		1.00	1.00
	Actual					3.23		4.80	2.15	0.93	0.97		0.82	0.99
171 of 211	Expected		1.00			3.00		4.00	2.00		2.00			2.00
	Actual		1.03			3.03		3.76	2.08		1.96			1.99
172 of 211	Expected	1.00	1.00			3.00		2.00	3.00		1.00			3.00
	Actual	1.01	0.98			3.01		1.94	3.04		1.03			2.95
173 of 211	Expected	1.00	2.00	1.00		1.00		3.00	2.00		1.00			3.00
	Actual	1.02	1.96	1.01		1.02		2.86	2.03		1.02			2.96
174 of 211	Expected	1.00	2.00	1.00	1.00	1.00		2.00	1.00		1.00			4.00
	Actual	1.06	1.98	0.99	0.99	1.04		1.87	1.03		0.98			3.92
175 of 211	Expected		2.00	1.00	1.00	1.00		1.00	2.00			1.00		3.00
	Actual		1.96	0.99	1.00	1.06		0.96	1.99			1.03		2.95
176 of 211	Expected		2.00	1.00	2.00	1.00			1.00		1.00	1.00		2.00
	Actual		1.99	1.02	2.00	1.08			1.03		1.01	1.03		2.05
177 of 211	Expected	1.00	2.00		2.00	1.00			2.00		1.00	2.00		
	Actual	1.00	2.02		2.02	1.08			2.08		1.02	2.02		
178 of 211	Expected	1.00	2.00		1.00	1.00			2.00		1.00	4.00		
	Actual	1.01	1.96		0.99	1.03			2.01		0.98	4.00		
179 of 211	Expected	1.00	3.00	1.00	2.00	1.00			1.00		1.00	4.00		
	Actual	1.02	2.95	0.98	1.98	1.02			1.04		0.99	3.90		
180 of 211	Expected	1.00	2.00	1.00	3.00	2.00		1.00	1.00			4.00		
	Actual	1.00	1.98	1.00	2.98	2.04		0.99	1.01			3.99		
181 of 211	Expected		2.00	1.00	5.00	4.00		1.00				2.00		
	Actual		1.97	1.00	5.07	4.07		1.01				1.96		
182 of 211	Expected		3.00	2.00	5.00	3.00		1.00				1.00		
	Actual		2.93	1.97	4.87	3.06		1.01				1.03		
183 of 211	Expected		4.00	2.00	4.00	3.00		1.00						
	Actual		3.88	2.03	4.00	3.06		0.99						

Figure 1: Amino Acid Analysis (continued)⁴

Peptide		Ala (A)	Arg (R)	Asx (N,D)	Glx (Q,E)	Gly (G)	His (H)	Ile (I)	Leu (L)	Lys (K)	Phe (F)	Pro (P)	Tyr (Y)	Val (V)
184 of 211	Expected		4.00	3.00	1.00	4.00			1.00					1.00
	Actual		3.92	2.86	0.99	4.06			1.07					1.00
185 of 211	Expected	1.00	3.00	3.00		2.00			3.00		1.00			1.00
	Actual	1.02	2.96	2.94		2.04			3.05		0.99			0.99
186 of 211	Expected	1.00	1.00	3.00		2.00		1.00	3.00		1.00			1.00
	Actual	1.05	0.94	3.00		1.99		1.00	3.04		1.01			0.99
187 of 211	Expected	1.00	1.00	3.00		1.00		1.00	4.00		1.00			1.00
	Actual	1.04	0.97	2.95		1.02		0.99	4.05		1.00			0.99
188 of 211	Expected	1.00	1.00	2.00				1.00	5.00		1.00			
	Actual	1.04	0.97	1.98				0.98	5.07		1.01			
189 of 211	Expected		2.00	2.00			1.00		4.00		1.00			
	Actual		1.94	1.98			1.01		4.07		1.01			
190 of 211	Expected		3.00	1.00			1.00		5.00		1.00			
	Actual		2.92	1.01			1.02		5.07		0.99			
191 of 211	Expected		2.00	1.00			1.00	1.00	5.00		1.00			1.00
	Actual		1.89	1.06			1.00	1.03	5.36		1.01			1.04
192 of 211	Expected		3.00	1.00	1.00		1.00	2.00	4.00					2.00
	Actual		2.96	1.13	1.05		0.92	1.93	4.13					2.00
193 of 211	Expected		2.00	1.00	1.00	1.00		2.00	5.00					2.00
	Actual		2.07	1.03	1.02	1.12		1.74	5.08					1.82
194 of 211	Expected		3.00		2.00	2.00		2.00	2.00					2.00
	Actual		3.03		2.06	2.04		1.85	2.14					1.88
195 of 211	Expected		2.00		2.00	2.00		1.00	3.00	1.00				2.00
	Actual		2.01		2.06	2.09		0.87	3.10	1.03				1.97
196 of 211	Expected		2.00	1.00	1.00	2.00			3.00	1.00				1.00
	Actual		1.97	0.97	0.99	1.99			3.08	1.01				1.01
197 of 211	Expected			1.00	2.00	1.00			3.00	1.00				1.00
	Actual			0.98	1.93	1.00			3.13	0.99				1.02
198 of 211	Expected			1.00	3.00				4.00	1.00				
	Actual			0.98	2.98				4.07	1.01				
199 of 211	Expected	1.00		2.00	3.00				3.00	1.00				
	Actual	1.07		1.93	2.93				3.14	1.01				
200 of 211	Expected	1.00		1.00	3.00				3.00	1.00				1.00
	Actual	1.03		0.99	2.88				3.04	0.99				1.01
201 of 211	Expected	3.00		2.00	2.00				3.00	1.00				1.00
	Actual	3.04		1.97	1.94				3.02	1.01				1.01
202 of 211	Expected	5.00		2.00				1.00	2.00					2.00
	Actual	5.39		1.86				1.08	1.95					2.10
203 of 211	Expected	4.00		2.00	1.00	1.00		1.00	2.00					1.00
	Actual	3.79		2.32	1.03	1.13		0.91	2.05					0.93
204 of 211	Expected	4.00	1.00	1.00	2.00	1.00		2.00						2.00
	Actual	3.98	1.00	1.01	2.01	1.03		1.95						1.98
205 of 211	Expected	2.00	2.00	1.00	3.00	1.00		1.00						4.00
	Actual	2.01	2.01	1.01	3.01	1.02		0.97						3.95
206 of 211	Expected	2.00	3.00	1.00	2.00	1.00		1.00						3.00
	Actual	2.07	2.98	1.04	2.06	0.97		0.95						2.94
207 of 211	Expected	2.00	2.00		2.00		1.00	3.00	1.00					3.00
	Actual	2.03	1.96		2.00		1.00	2.89	1.11					2.81
208 of 211	Expected	2.00	4.00		1.00		1.00	3.00	1.00			1.00		1.00
	Actual	2.02	3.96		0.94		1.01	3.01	1.04			1.07		0.94

Figure 1: Amino Acid Analysis (continued)⁴

Peptide		Ala (A)	Arg (R)	Asx (N,D)	Glx (Q,E)	Gly (G)	His (H)	Ile (I)	Leu (L)	Lys (K)	Phe (F)	Pro (P)	Tyr (Y)	Val (V)
209 of 211	Expected	1.00	4.00		1.00	1.00	1.00	3.00	2.00			1.00		
	Actual	1.01	3.94		0.99	1.02	0.98	2.96	2.02			1.01		
210 of 211	Expected	1.00	4.00		2.00	1.00	1.00	2.00	3.00			1.00		
	Actual	1.05	3.85		2.08	1.02	0.95	2.01	3.00			0.97		
211 of 211	Expected	1.00	4.00		2.00	1.00		1.00	3.00					
	Actual	1.03	3.92		2.00	1.02		0.96	3.01					

⁴Results were not reported for the following amino acids due to partial or complete destruction during hydrolysis: cysteine (C), methionine (M), serine (S), threonine (T) and tryptophan (W).

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