Supporting Information

Supplementary Figure Legends

Supplementary Figure 1. Size-exclusion chromatography. UV Absorbance traces of the elution of the tEGFR:EGF (red; V_e = 13.74 ml) and tEGFR:cetuximab Fab (blue; V_e = 14.11 ml) complexes from a Superose 6 (GE Healthcare) size-exclusion column. tEGFR alone eluted at 15.0 ml.

Supplementary Figure 2. Quantification of Phosphotyrosine 845. (A) ProteinPilot decovoluted fragmentation spectrum of +4 charged parent ion 656.6. Observed b and y ions of L(iT8)LGAEEK(iT8)EY(Pho)HAEGGK(iT8) are shown. (B) Expanded low mass region of spectrum in A shows report ion intensities. (C) Predicted fragment ions of L(iT8)LGAEEK(iT8)EY(Pho)HAEGGK(iT8). Ions observed in A are in bold. iTRAQ label (iT8), phosphorylated (Pho).

Supplementary Figure 3. Quantification of Phosphotyrosine 845. (A) ProteinPilot deconvoluted fragmentation spectrum of +6 charged parent ion 561.6 Observed b and y ions of L(iT8)LGAEEK(iT8)EY(Pho)HAEGGK(iT8)VPIK(iT8) are shown. (B) Expanded low mass region of spectrum in A shows report ion intensities. (C) Predicted fragment ions of L(iT8)LGAEEK(iT8)EY(Pho)HAEGGK(iT8)VPIK(iT8). Ions observed in A are in bold. iTRAQ label (iT8), phosphorylated (Pho).

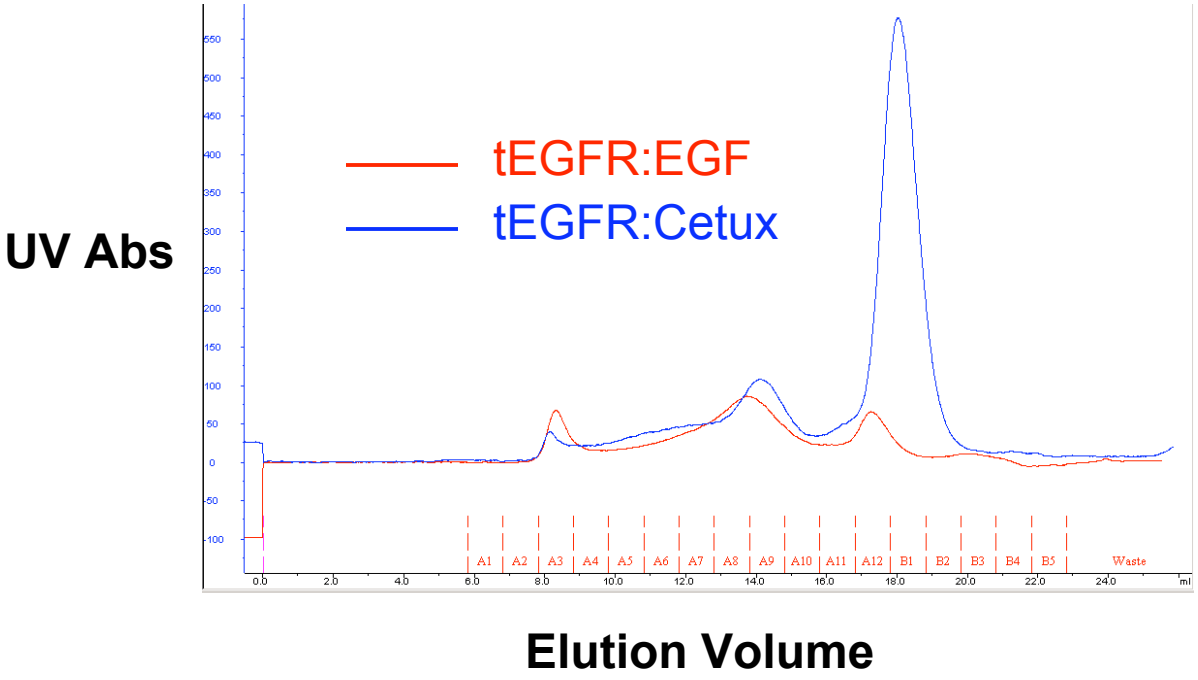
Supplementary Figure 4. Quantification of Phosphotyrosine 974. (A) ProteinPilot deconvoluted fragmentation spectrum of +3 charged parent ion 655.6. Observed b and y

ions of M(Oxi,iT8)HLPSPTDSNFY(Pho)R are shown. (B) Expanded low mass region of spectrum in A shows report ion intensities. (C) Predicted fragment ions of M(Oxi,iT8)HLPSPTDSNFY(Pho)R. Ions observed in A are in bold. iTRAQ label (iT8), phosphorylated (Pho), oxidation (Oxi).

Supplementary Figure 5. Quantification of Phosphothreonine 669. (A) ProteinPilot deconvoluted fragmentation spectrum of +3 charged parent ion 806.8. Observed b and y ions of E(iT8)LVEPLT(Pho)PSGEAPNQALLR are shown. (B) Expanded low mass region of spectrum in A shows report ion intensities. (C) Predicted fragment ions of E(iT8)LVEPLT(Pho)PSGEAPNQALLR. Ions observed in A are in bold. iTRAQ label (iT8), phosphorylated (Pho).

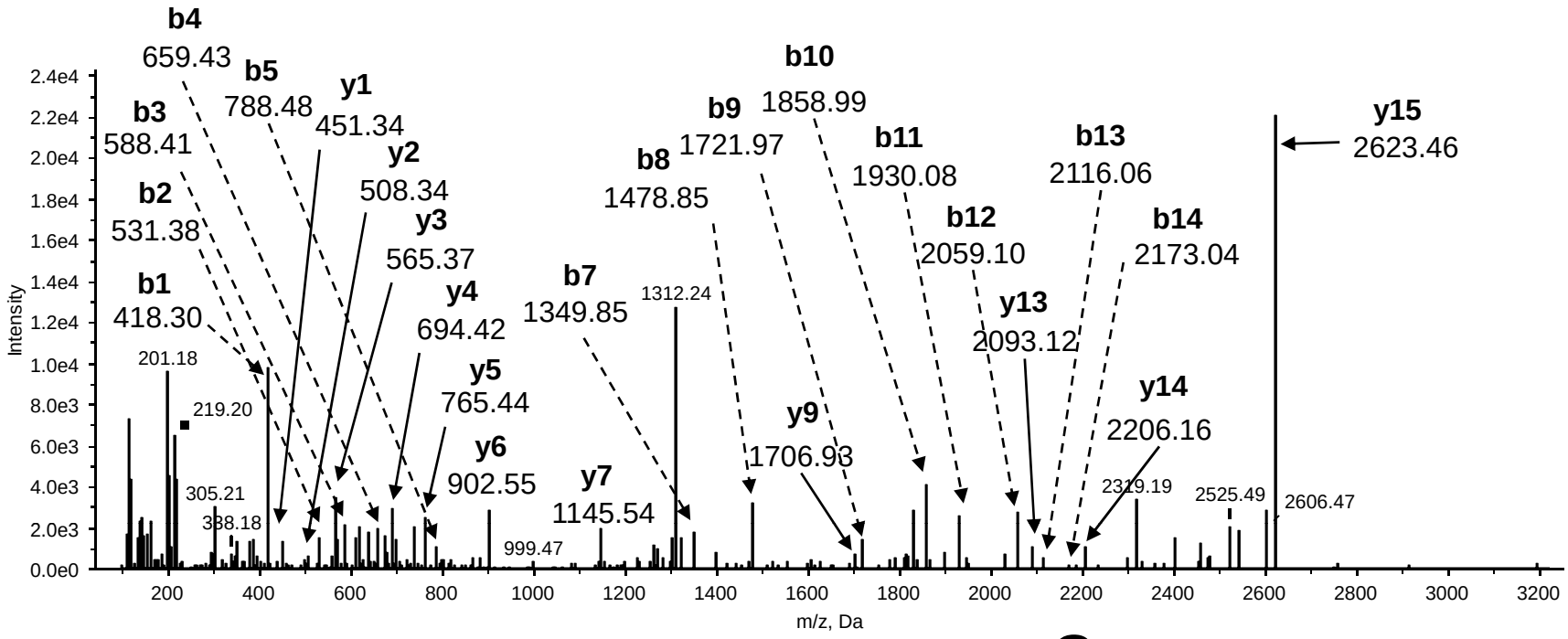
Supplementary Figure 6. Quantification of Phosphoserine 967. (A) ProteinPilot deconvoluted fragmentation spectrum of +3 charged parent ion 655.6. Observed b and y ions of M(Oxi,iT8)HLPS(Pho)PTDSNFYR are shown. (B) Expanded low mass region of spectrum in A shows report ion intensities. (C) Predicted fragment ions of M(Oxi,iT8)HLPS(Pho)PTDSNFYR. Ions observed in A are in bold. iTRAQ label (iT8), phosphorylated (Pho), oxidation (Oxi).

Supplementary Figure 1. Size-exclusion Chromatography

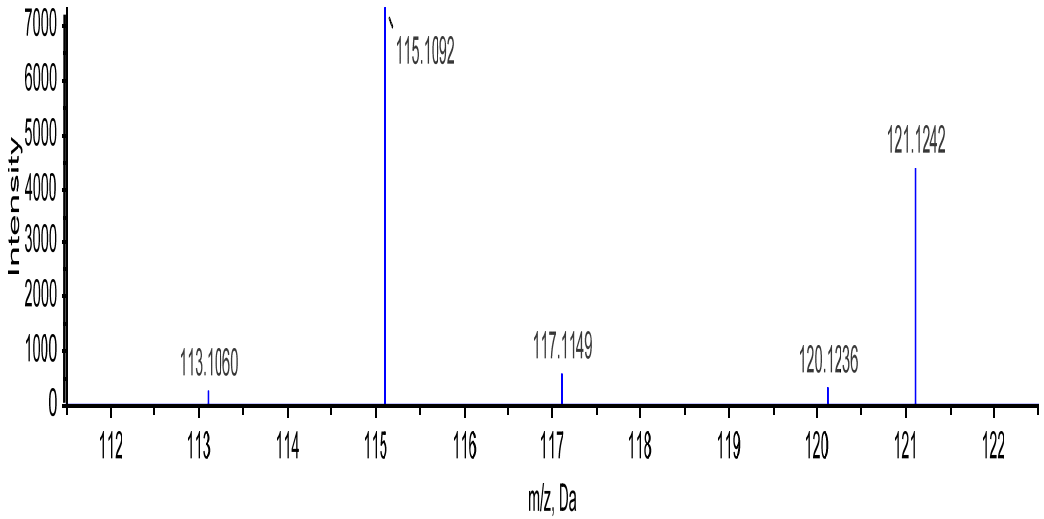


Supplemental Figure 2

A



B

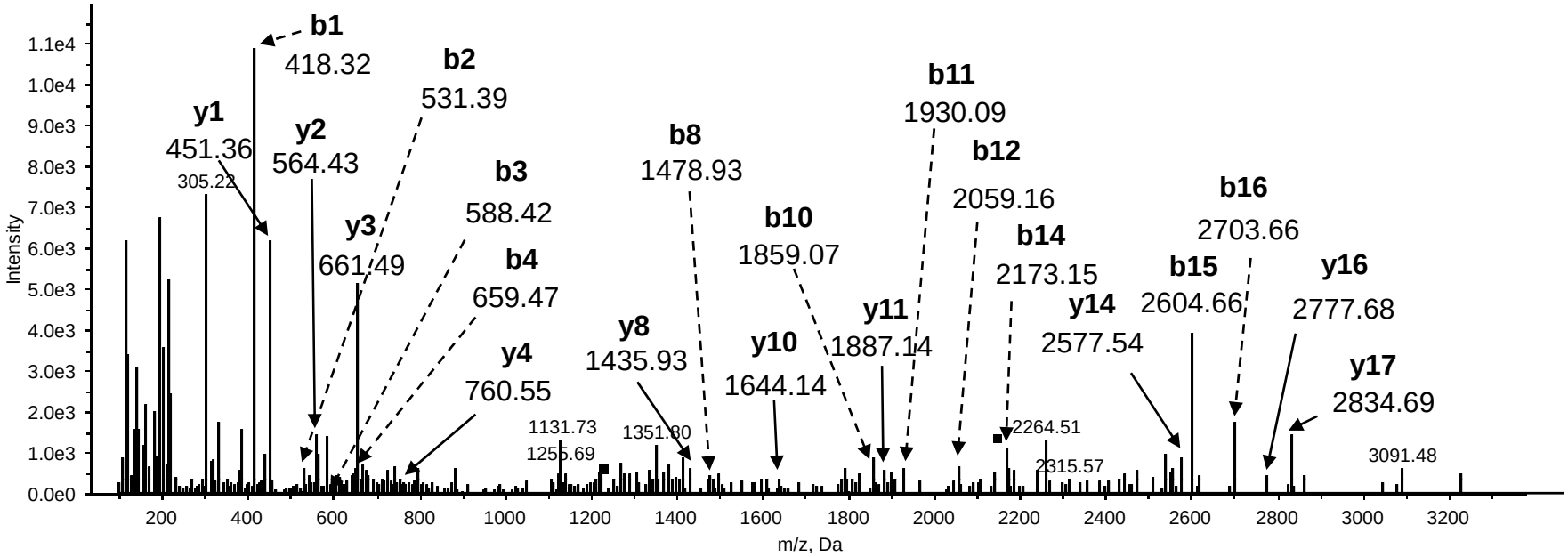


C

Residue	b	y
L [IT8]	**418.30**	**2623.39**
L	**531.38**	**2206.10**
G	**588.40**	**2093.02**
A	**659.44**	2035.99
E	**788.48**	1964.96
E	917.52	1835.91
K[IT8]	**1349.82**	**1706.87**
E	**1478.87**	1274.57
Y[Pho]	**1721.90**	**1145.53**
H	**1858.96**	**902.50**
A	**1929.99**	**765.44**
E	**2059.04**	**694.40**
G	**2116.06**	**565.36**
G	**2173.08**	**508.34**
K[IT8]	2605.38	**451.32**

Supplemental Figure 3

A



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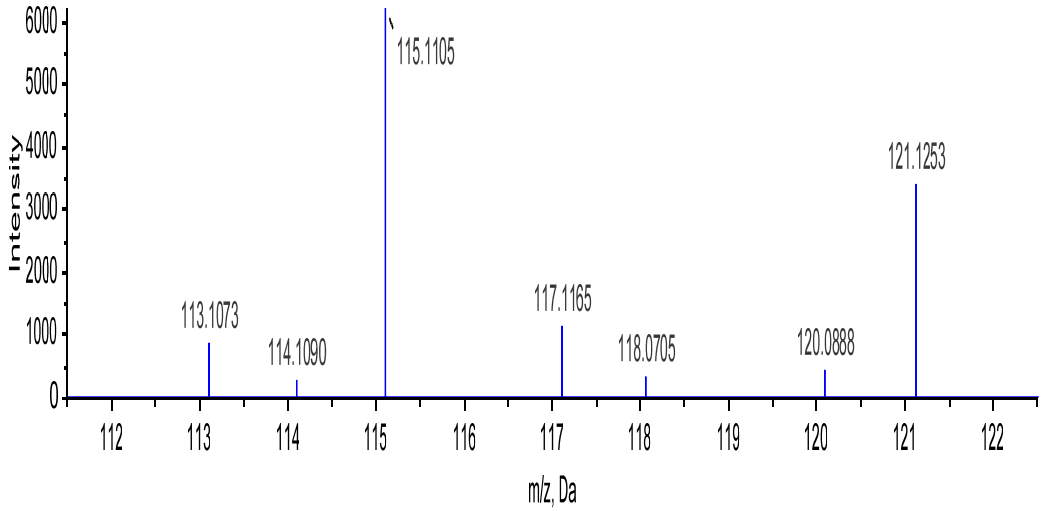
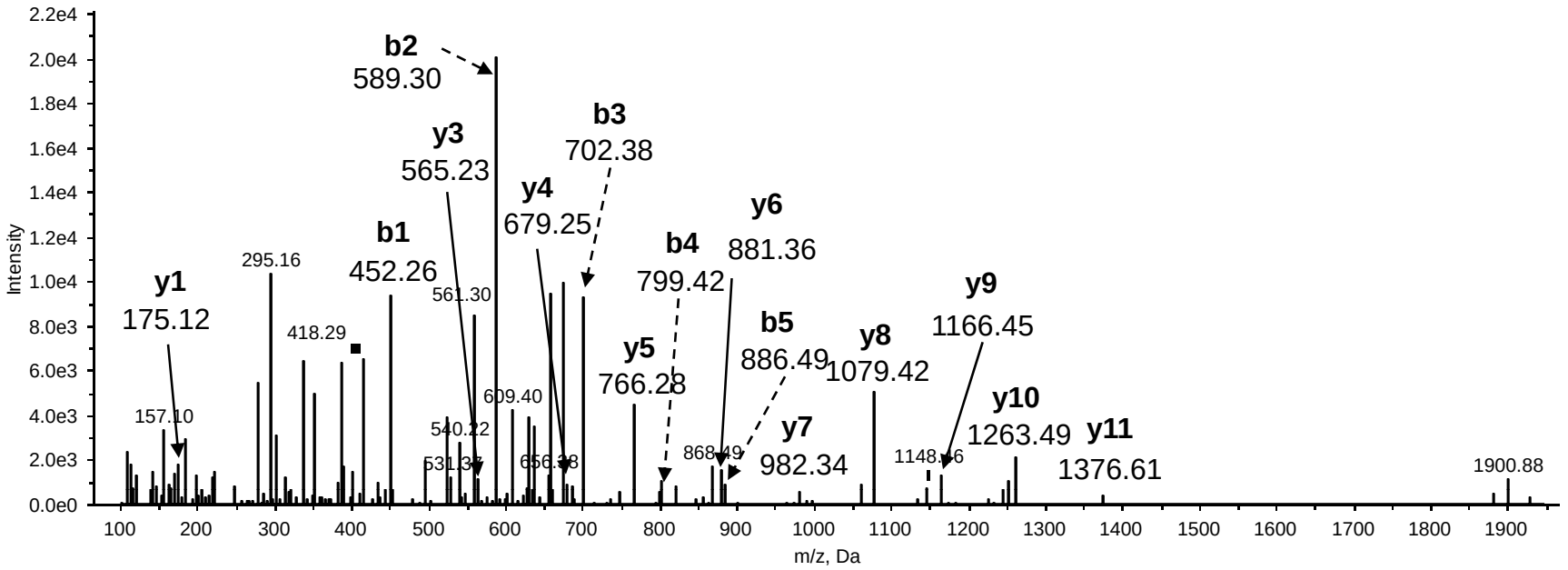


C

Residue	b	y
L [IT8]	**418.30**	3364.90
L	**531.38**	2947.61
G	**588.40**	**2834.52**
A	**659.44**	**2777.50**
E	788.48	2706.46
E	917.52	**2577.42**
K[IT8]	1349.82	2448.38
E	**1478.87**	2016.08
Y[Pho]	1721.90	**1887.03**
H	**1858.96**	**1644.01**
A	**1929.99**	1506.95
E	**2059.04**	**1435.91**
G	2116.06	1306.87
G	**2173.08**	1249.85
K[IT8]	**2605.38**	1192.82
V	**2704.45**	**760.52**
P	2801.50	**661.46**
I	2914.58	**564.40**
K[IT8]	3346.88	**451.32**

Supplemental Figure 4

A



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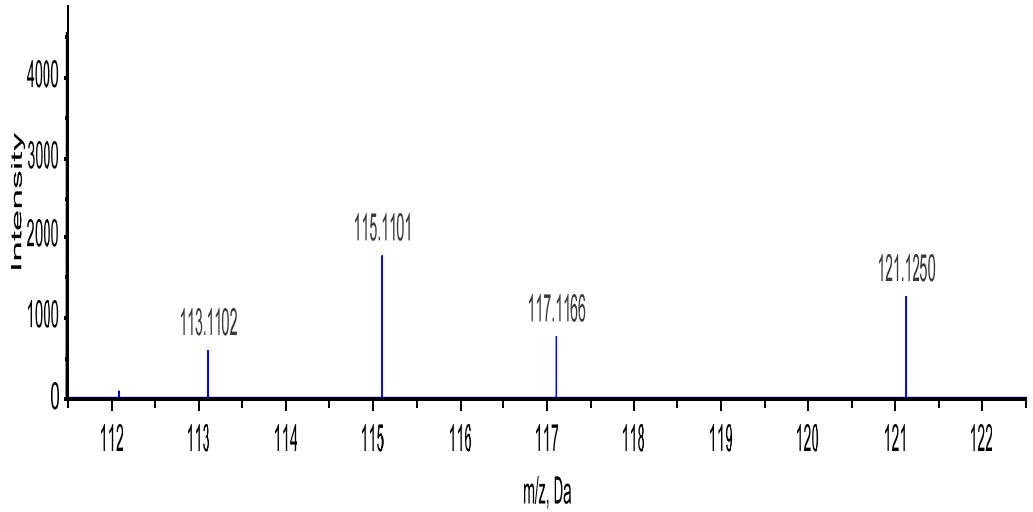
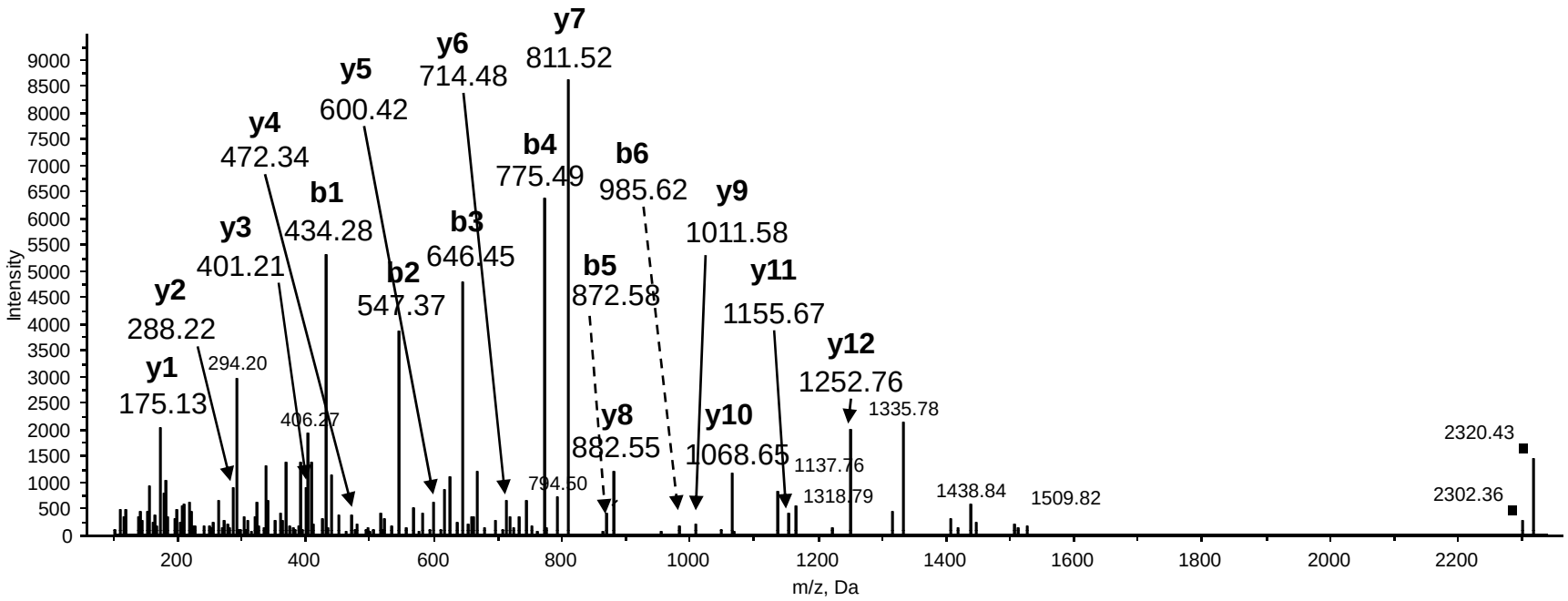


C

Residue	b	y
M[Oxi][IT8]	**452.25**	1964.89
H	**589.31**	1513.65
L	**702.39**	**1376.59**
P	**799.44**	**1263.50**
S	**886.48**	**1166.45**
P	983.53	**1079.42**
T	1084.58	**982.37**
D	1199.60	**881.32**
S	1286.64	**766.29**
N	1400.68	**679.26**
F	1547.75	**565.22**
Y[Pho]	1790.78	418.15
R	1946.88	**175.12**

Supplemental Figure 5

A



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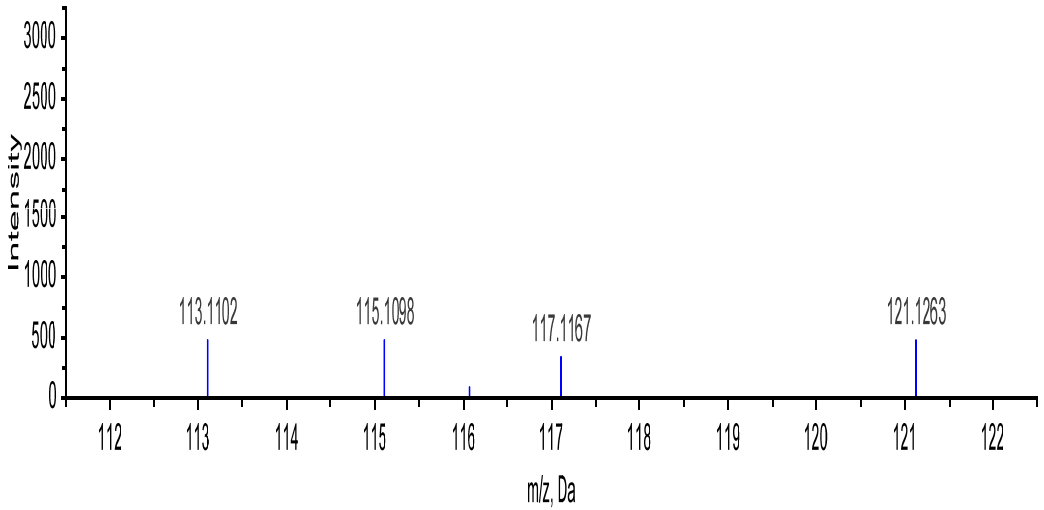
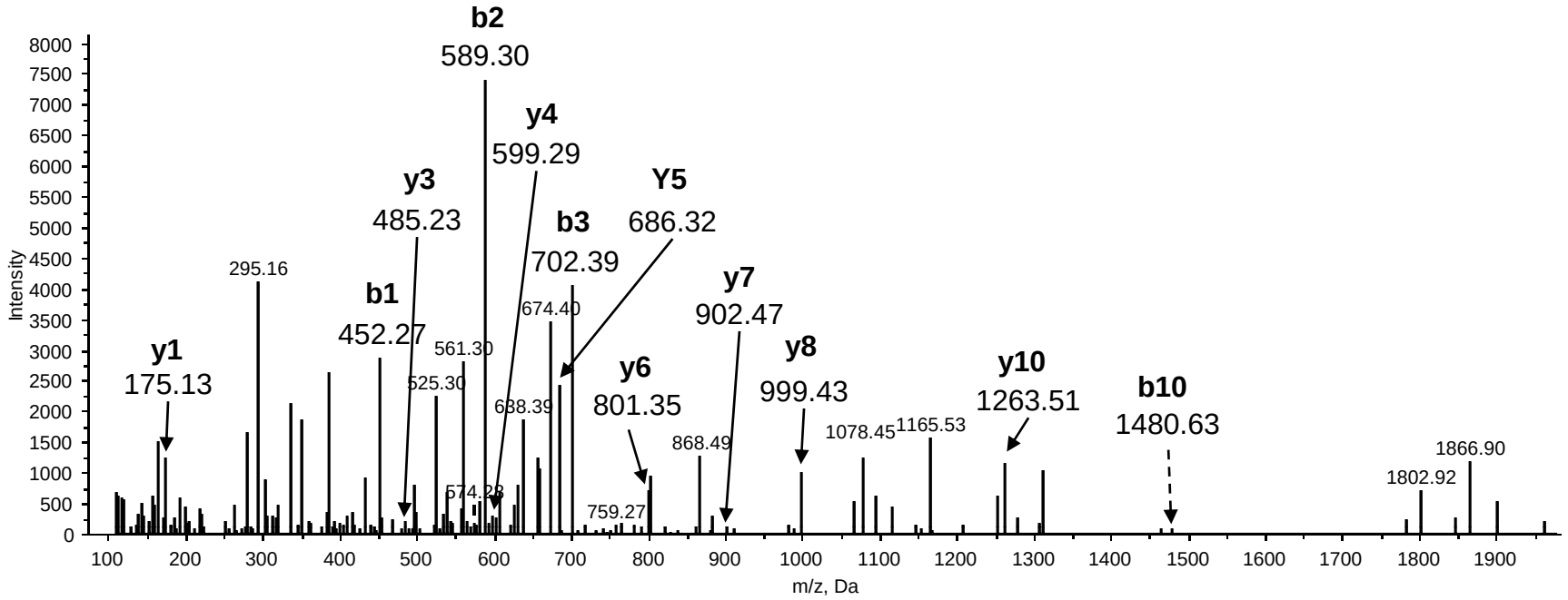


C

Residue	b	y
E[IT8]	**434.26**	2418.26
L	**547.34**	1985.01
V	**646.41**	1871.93
E	**775.45**	1772.86
P	**872.50**	1643.82
L	**985.59**	1546.76
T[Pho]	1166.60	1433.68
P	1263.65	**1252.66**
S	1350.69	**1155.61**
G	1407.71	**1068.58**
E	1536.75	**1011.56**
A	1607.79	**882.52**
P	1704.84	**811.48**
N	1818.88	**714.43**
Q	1946.94	**600.38**
A	2017.98	**472.32**
L	2131.06	**401.29**
L	2244.15	**288.20**
R	2400.25	**175.12**

Supplemental Figure 6

A



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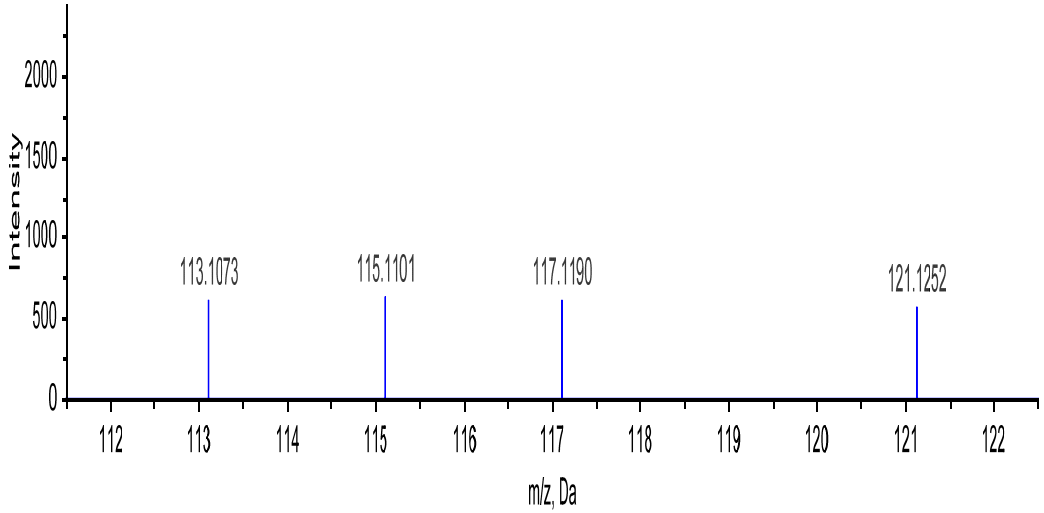

C

Residue	b	y
M[Oxi][IT8]	**452.25**	1964.89
H	**589.31**	1513.65
L	**702.39**	1376.59
P	799.44	**1263.50**
S[Pho]	966.44	**1166.45**
P	1063.49	**999.45**
T	1164.54	**902.40**
D	1279.57	**801.35**
S	1366.60	**686.33**
N	**1480.64**	**599.29**
F	1627.71	**485.25**
Y	1790.78	**338.18**
R	1946.88	**175.12**