

Supporting Information

Dynamic phosphorylation of apoptosis signal regulating kinase 1 (ASK1) in response to oxidative and electrophilic stress

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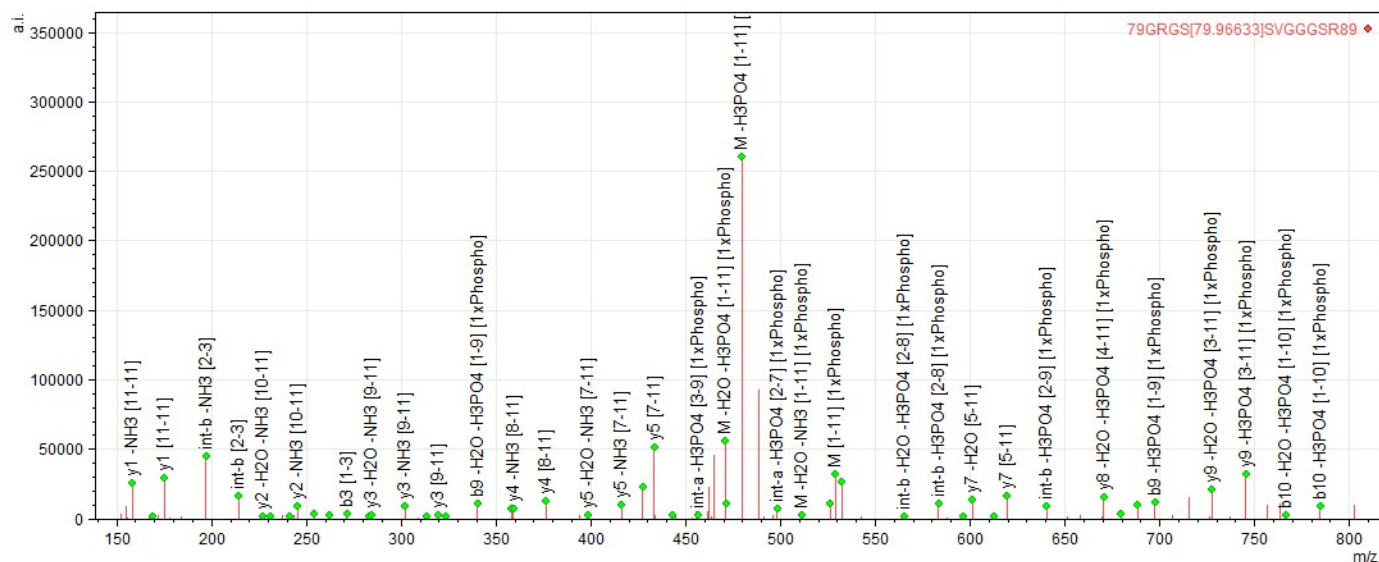
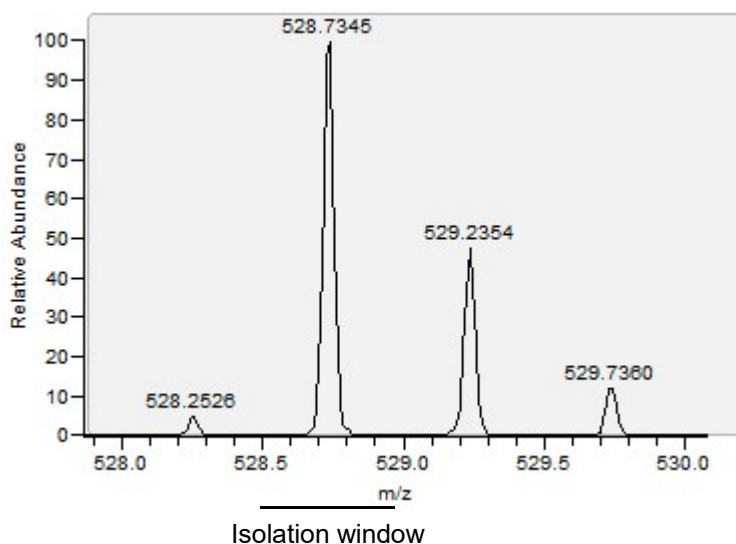
Figure S1. Annotated MS/MS spectra for each manually validated phosphopeptide. Where possible, the phosphorylation was localized to a single residue. When this was not possible with the data at hand, the phosphorylation was localized to the fewest possible sites with sufficient explanatory evidence. Each page lists the peptide sequence, site(s) of modification, MS1 isolation window, precursor mass accuracy, annotated MS/MS spectrum, and a table summarizing the identified peaks for the MS/MS spectrum.

⁷⁹GRGS[79.96633]SVGGGSR⁸⁹

Ser 82/83

Precursor m/z: 528.7345

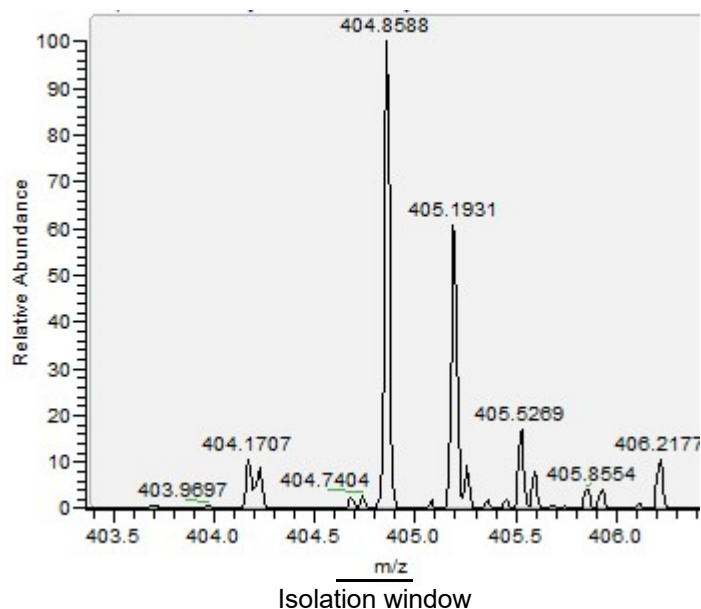
Precursor mass error: 5.20 ppm



parameter	value
Number of peaks searched	90
Number of fragments searched	756
Number of fragments matched	63
Intensity matched	74 %
Sequence length	11
Ion serie matches for "b"	2, 3
Ion serie matches for "b -H2O"	
Ion serie matches for "b -H2O -H3PO4"	7, 7, 9, 9, 10
Ion serie matches for "b -H2O -NH3"	
Ion serie matches for "b -H3PO4"	4, 5, 6, 7, 8, 9, 10
Ion serie matches for "b -NH3"	2, 3
Ion serie matches for "b -NH3 -H3PO4"	4
Ion serie matches for "y"	1, 2, 3, 4, 5, 6, 7
Ion serie matches for "y -H2O"	4, 7
Ion serie matches for "y -H2O -H3PO4"	8, 9
Ion serie matches for "y -H2O -NH3"	2, 3, 5
Ion serie matches for "y -H3PO4"	8, 9
Ion serie matches for "y -NH3"	1, 2, 3, 4, 5
Ion serie matches for "y -NH3 -H3PO4"	10

Figure S1.

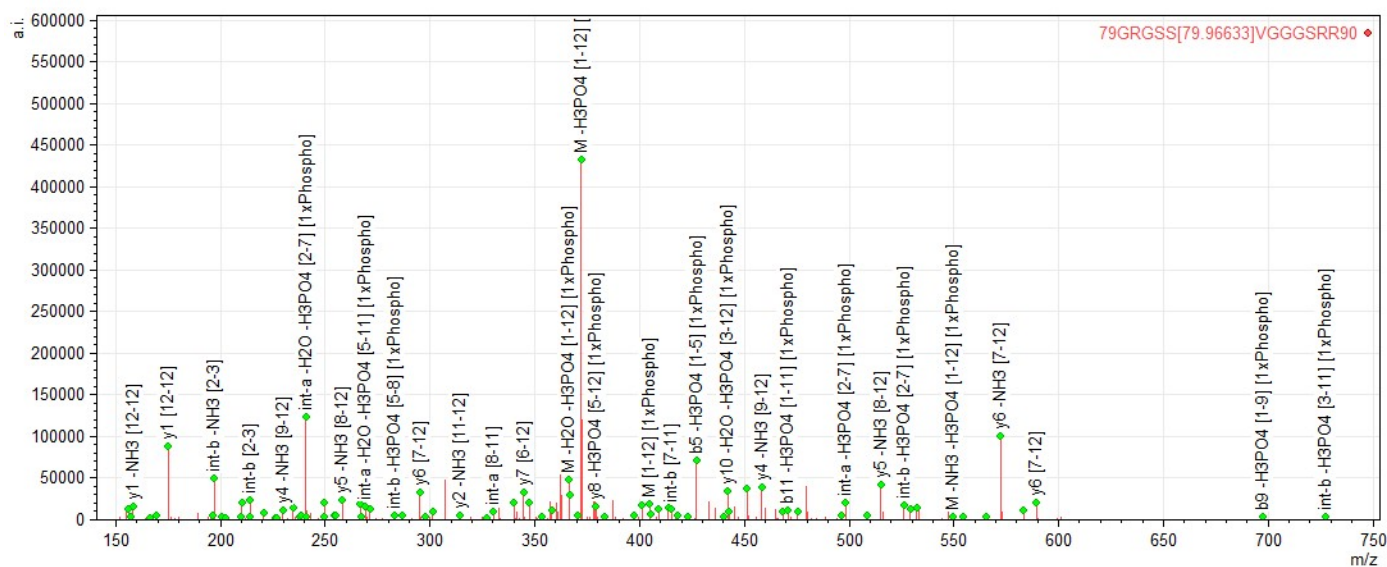
⁷⁹GRGSS[79.96633]VGGGSRR⁹⁰



Ser 82/83

Precursor m/z: 404.8588

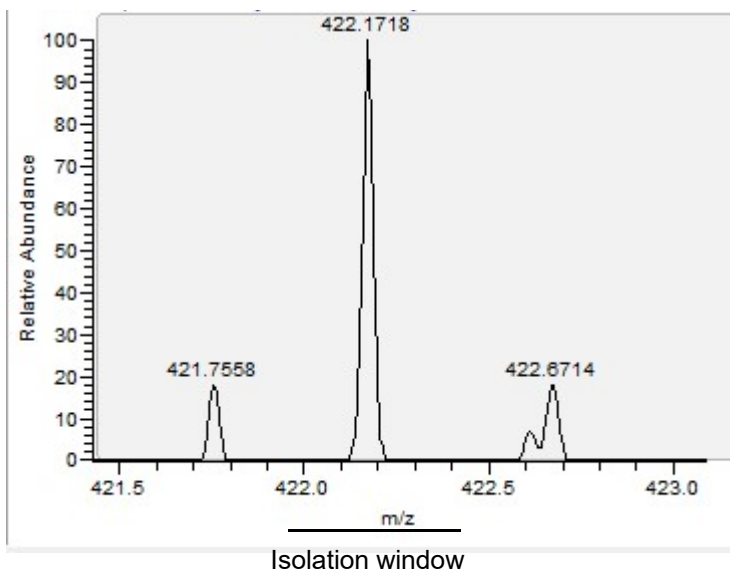
Precursor mass error: -2.06 ppm



parameter	value
Number of peaks searched	186
Number of fragments searched	1485
Number of fragments matched	114
Intensity matched	64 %
Sequence length	12
Ion serie matches for "b"	2, 3, 4
Ion serie matches for "b -H2O"	4
Ion serie matches for "b -H2O -H3PO4"	5, 6, 6, 7, 7, 9, 9
Ion serie matches for "b -H2O -NH3"	
Ion serie matches for "b -H3PO4"	5, 6, 7, 9, 11
Ion serie matches for "b -NH3"	2, 3, 8
Ion serie matches for "b -NH3 -H3PO4"	
Ion serie matches for "y"	1, 2, 3, 3, 4, 4, 5, 5, 6, 6, 7
Ion serie matches for "y -H2O"	3
Ion serie matches for "y -H2O -H3PO4"	9, 10
Ion serie matches for "y -H2O -NH3"	3, 4, 4, 5, 6, 7
Ion serie matches for "y -H3PO4"	8, 9, 10, 10, 11, 11
Ion serie matches for "y -NH3"	1, 2, 3, 4, 4, 5, 5, 6, 6
Ion serie matches for "y -NH3 -H3PO4"	8, 10, 11

Figure S1.

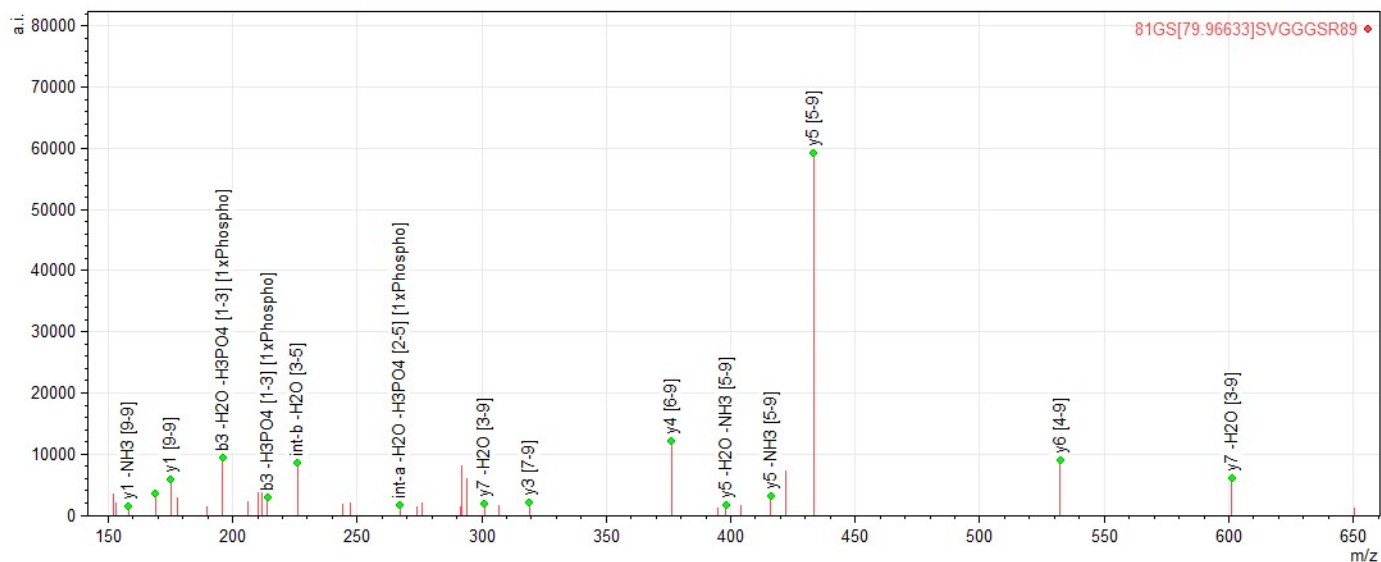
⁸¹GS[79.96633]SVGGGR⁸⁹



Ser 82/83

Precursor m/z: 422.1718

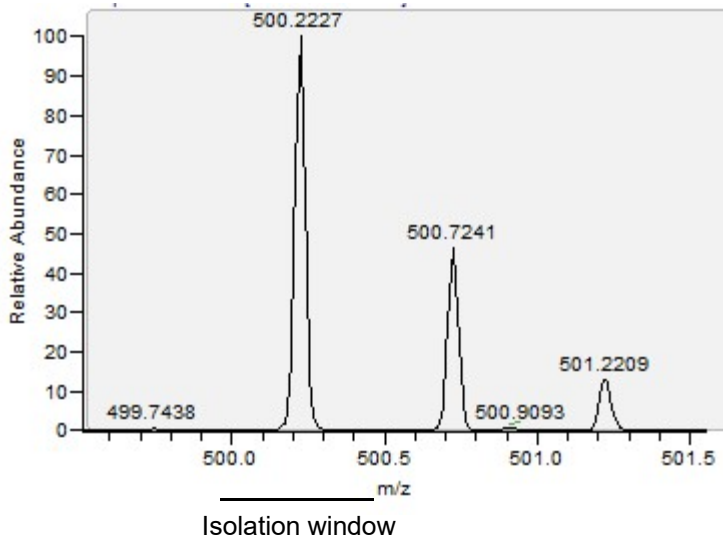
Precursor mass error: -0.83 ppm



parameter	value
Number of peaks searched	39
Number of fragments searched	356
Number of fragments matched	16
Intensity matched	62 %
Sequence length	9
Ion serie matches for "b"	
Ion serie matches for "b -H2O"	
Ion serie matches for "b -H2O -H3PO4"	3
Ion serie matches for "b -H3PO4"	3
Ion serie matches for "y"	1, 3, 4, 5, 6
Ion serie matches for "y -H2O"	3, 7, 7
Ion serie matches for "y -H2O -H3PO4"	
Ion serie matches for "y -H2O -NH3"	5
Ion serie matches for "y -H3PO4"	
Ion serie matches for "y -NH3"	1, 5
Ion serie matches for "y -NH3 -H3PO4"	

Figure S1.

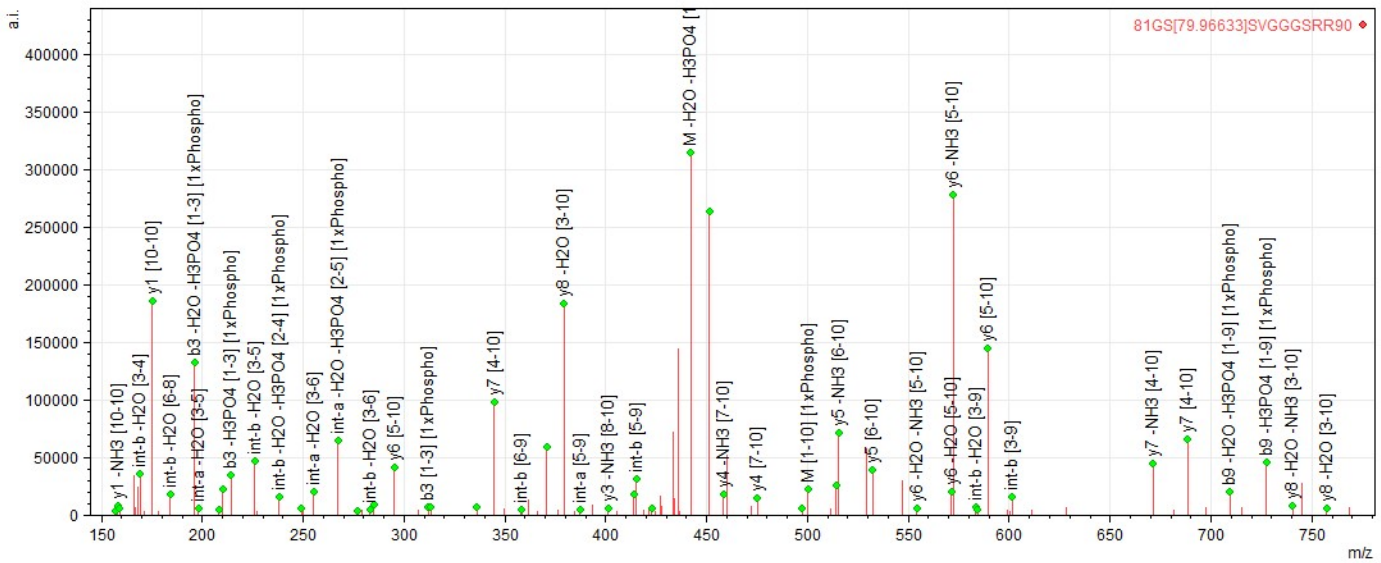
⁸¹GS[79.96633]SVGGGSRR⁹⁰



Ser 82/83

Precursor m/z: 500.2227

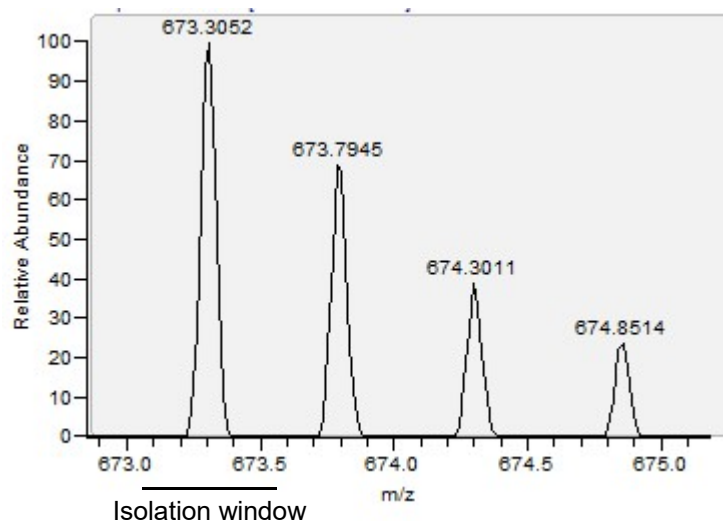
Precursor mass error: -1.40 ppm



parameter	value
Number of peaks searched	97
Number of fragments searched	502
Number of fragments matched	58
Intensity matched	79 %
Sequence length	10
Ion serie matches for "b"	3
Ion serie matches for "b -H2O"	
Ion serie matches for "b -H2O -H3PO4"	3, 8, 9
Ion serie matches for "b -H2O -NH3"	
Ion serie matches for "b -H3PO4"	3, 4, 9
Ion serie matches for "b -NH3"	
Ion serie matches for "b -NH3 -H3PO4"	
Ion serie matches for "y"	1, 4, 5, 6, 6, 7, 7
Ion serie matches for "y -H2O"	5, 6, 8, 8
Ion serie matches for "y -H2O -H3PO4"	9
Ion serie matches for "y -H2O -NH3"	5, 5, 6, 8, 8
Ion serie matches for "y -H3PO4"	9
Ion serie matches for "y -NH3"	1, 3, 4, 5, 6, 7, 7
Ion serie matches for "y -NH3 -H3PO4"	

Figure S1.

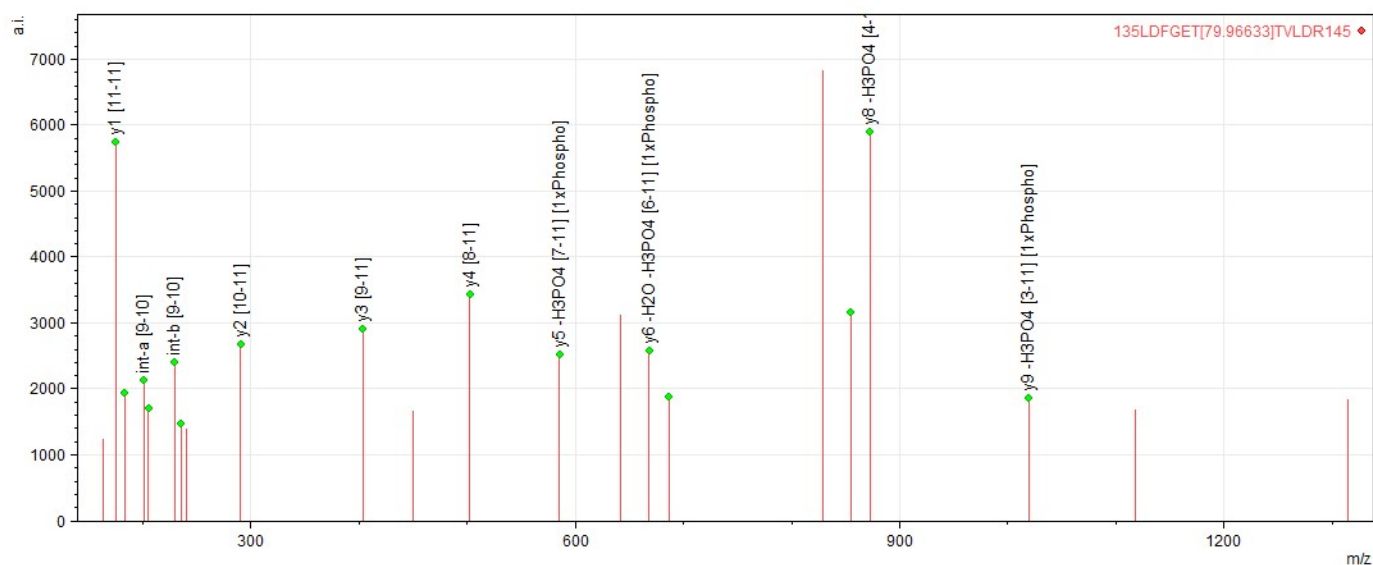
¹³⁵LDFGET[79.96633]TVLDR¹⁴⁵



Thr 140/141

Precursor m/z: 673.3052

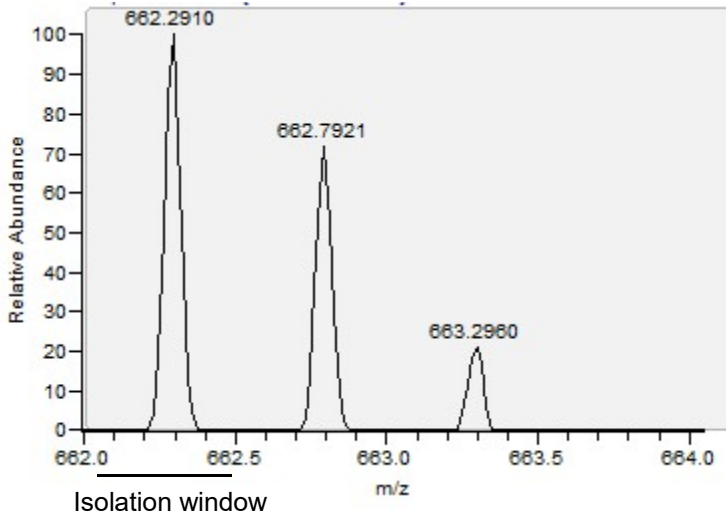
Precursor mass error: 0.30 ppm



parameter	value
Number of peaks searched	22
Number of fragments searched	684
Number of fragments matched	19
Intensity matched	70 %
Sequence length	11
Ion serie matches for "b"	2
Ion serie matches for "b -H2O"	
Ion serie matches for "b -H2O -H3PO4"	
Ion serie matches for "b -H3PO4"	
Ion serie matches for "y"	1, 2, 3, 4
Ion serie matches for "y -H2O"	5
Ion serie matches for "y -H2O -H3PO4"	6, 8
Ion serie matches for "y -H2O -NH3"	
Ion serie matches for "y -H3PO4"	6, 8, 9
Ion serie matches for "y -NH3"	
Ion serie matches for "y -NH3 -H3PO4"	

Figure S1.

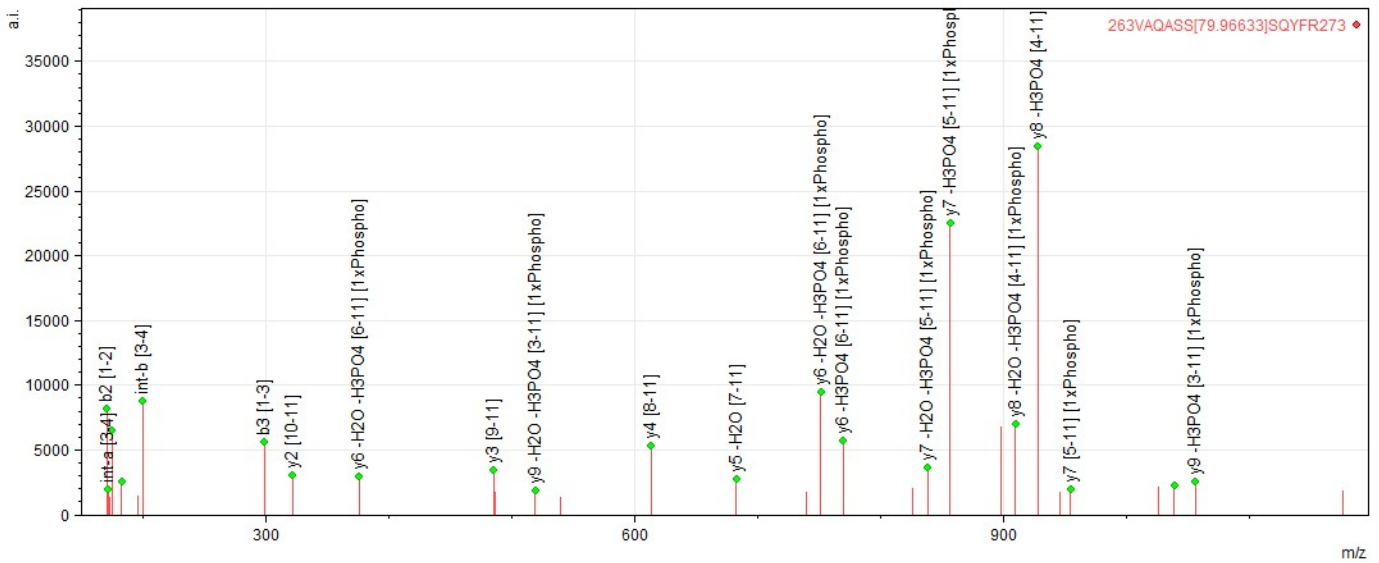
²⁶³VAQASS[79.96633]SQYFR²⁷³



Ser 268/269

Precursor m/z: 662.2910

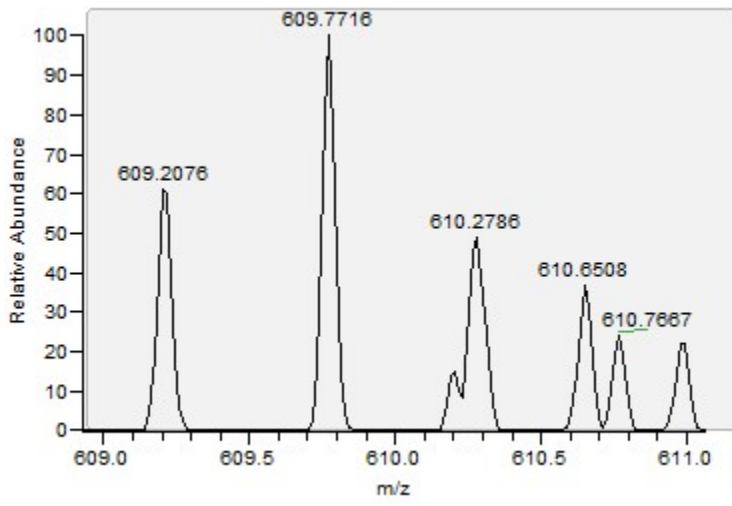
Precursor mass error: -1.36 ppm



parameter	value
Number of peaks searched	31
Number of fragments searched	976
Number of fragments matched	27
Intensity matched	86 %
Sequence length	11
Ion serie matches for "b"	2, 3
Ion serie matches for "b -H2O"	
Ion serie matches for "b -H2O -H3PO4"	
Ion serie matches for "b -H2O -NH3"	
Ion serie matches for "b -H3PO4"	
Ion serie matches for "b -NH3"	
Ion serie matches for "b -NH3 -H3PO4"	
Ion serie matches for "y"	1, 2, 3, 4, 7
Ion serie matches for "y -H2O"	5
Ion serie matches for "y -H2O -H3PO4"	6, 6, 7, 8, 9
Ion serie matches for "y -H2O -NH3"	
Ion serie matches for "y -H3PO4"	6, 7, 8, 9
Ion serie matches for "y -NH3"	
Ion serie matches for "y -NH3 -H3PO4"	9

Figure S1.

353FHY[79.96633]AFALNR³⁶¹

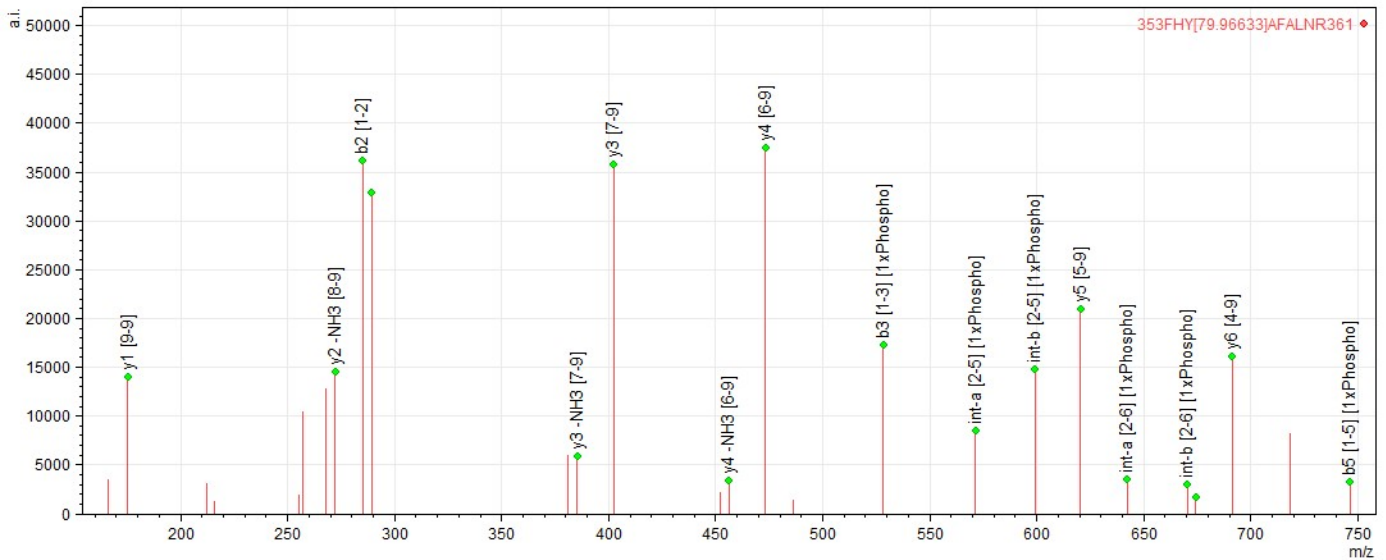


Tyr 355

Precursor m/z: 609.7716

Precursor mass error: 7.87 ppm

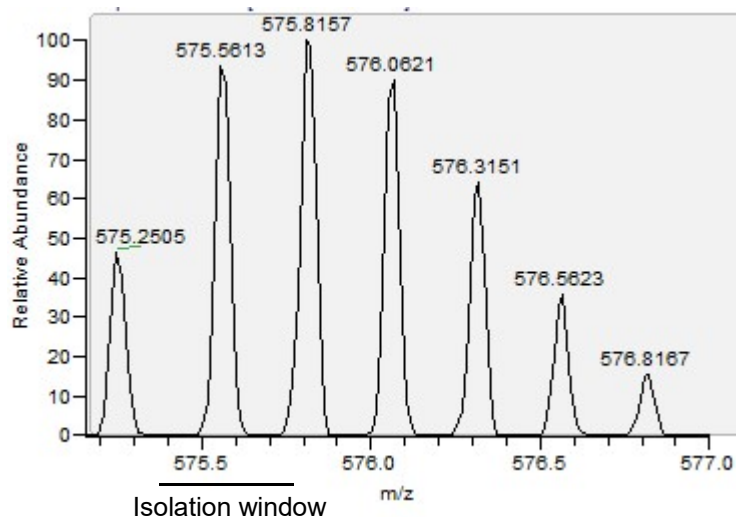
Isolation window



parameter	value
Number of peaks searched	27
Number of fragments searched	182
Number of fragments matched	18
Intensity matched	84 %
Sequence length	9
Ion serie matches for "b"	2, 3, 4, 5
Ion serie matches for "b -NH3"	
Ion serie matches for "y"	1, 2, 3, 4, 5, 6
Ion serie matches for "y -NH3"	2, 3, 4, 6

Figure S1.

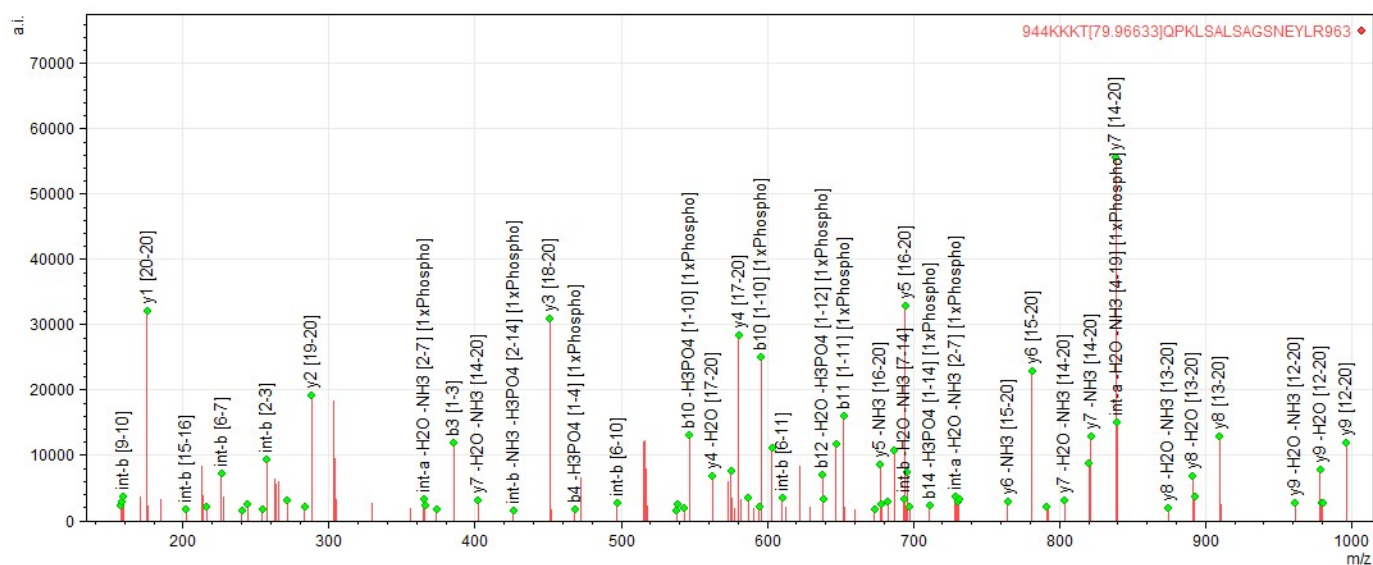
944KKKT[79.96633]QPKLSALSAGSNEYLR⁹⁶³



Thr 947/S952

Precursor m/z: 575.5613

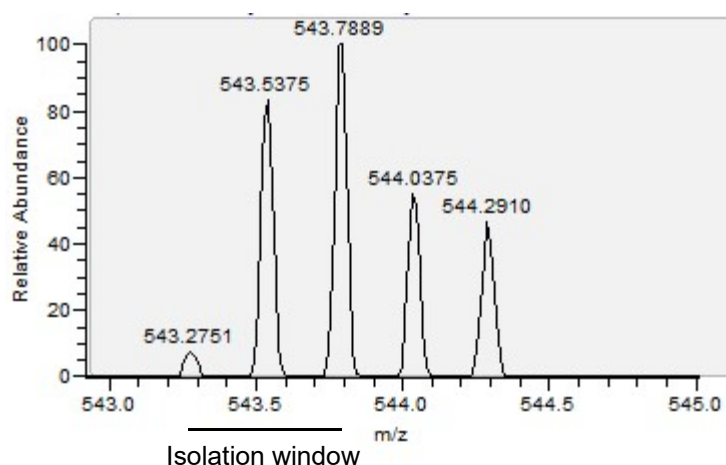
Precursor mass error: -0.52 ppm



parameter	value
Number of peaks searched	108
Number of fragments searched	6332
Number of fragments matched	100
Intensity matched	76 %
Sequence length	20
Ion serie matches for "b"	2, 3, 5, 10, 11, 12, 13
Ion serie matches for "b -H2O"	10, 12
Ion serie matches for "b -H2O -H3PO4"	10, 11, 12, 13, 15
Ion serie matches for "b -H2O -NH3"	12, 16
Ion serie matches for "b -H3PO4"	4, 10, 11, 12, 13, 14
Ion serie matches for "b -NH3"	2
Ion serie matches for "b -NH3 -H3PO4"	4, 10, 12
Ion serie matches for "y"	1, 2, 3, 4, 5, 6, 7, 8, 9
Ion serie matches for "y -H2O"	4, 7, 8, 9
Ion serie matches for "y -H2O -H3PO4"	
Ion serie matches for "y -H2O -NH3"	6, 7, 7, 8, 9
Ion serie matches for "y -H3PO4"	
Ion serie matches for "y -NH3"	1, 2, 5, 6, 7, 8, 9
Ion serie matches for "y -NH3 -H3PO4"	

Figure S1.

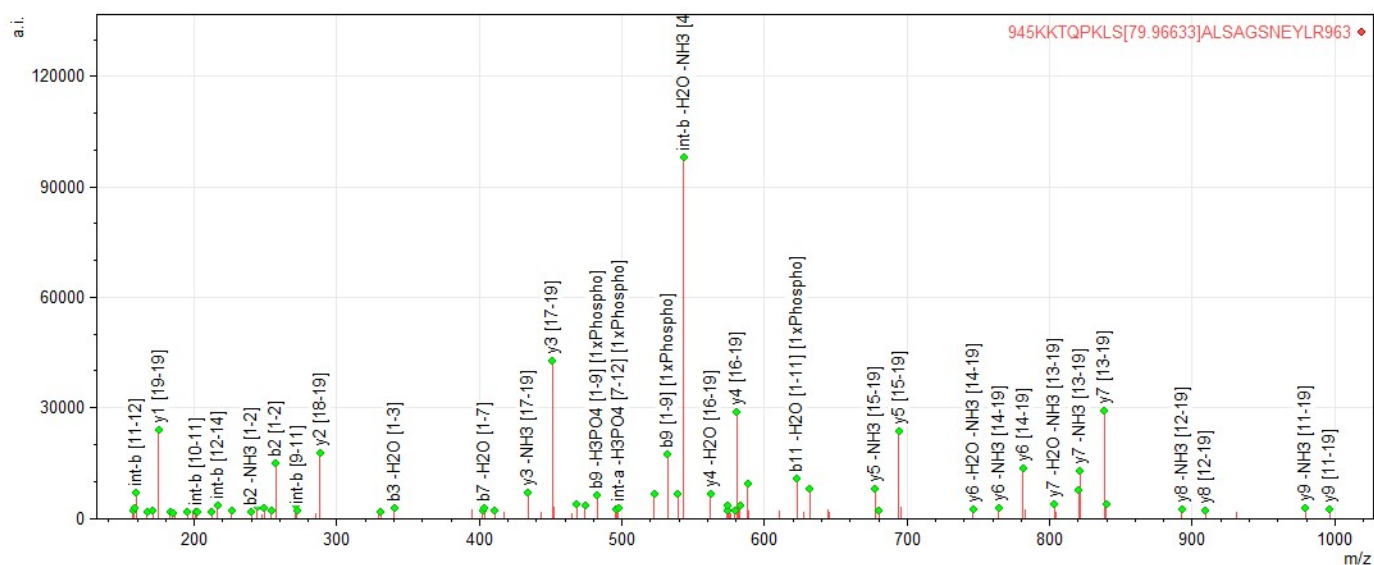
⁹⁴⁵KKTQPKLS[79.96633]ALSAGSNEYLR⁹⁶³



Thr 947/S952

Precursor m/z: 543.5375

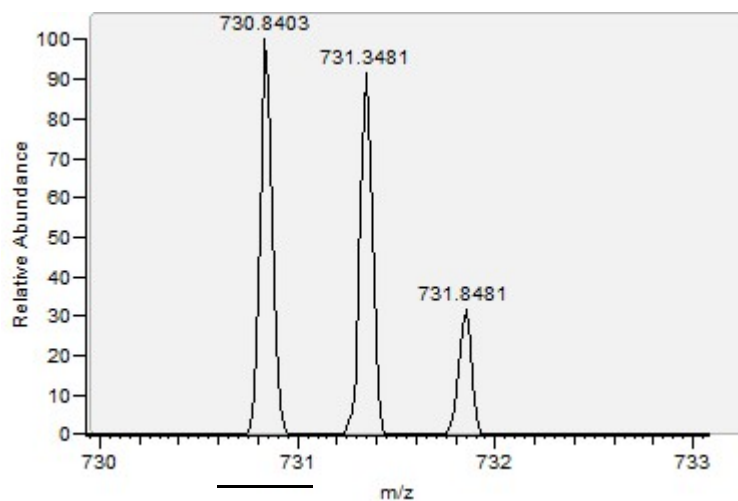
Precursor mass error: -2.85 ppm



parameter	value
Number of peaks searched	93
Number of fragments searched	6352
Number of fragments matched	93
Intensity matched	89 %
Sequence length	19
Ion series matches for "b"	2, 8, 9, 10, 11
Ion series matches for "b -H2O"	3, 4, 7, 9, 10, 11
Ion series matches for "b -H2O -H3PO4"	11
Ion series matches for "b -H2O -NH3"	4
Ion series matches for "b -H3PO4"	9, 10, 11
Ion series matches for "b -NH3"	2, 3
Ion series matches for "b -NH3 -H3PO4"	9, 11
Ion series matches for "y"	1, 2, 3, 4, 5, 6, 7, 8, 9
Ion series matches for "y -H2O"	4, 7, 7
Ion series matches for "y -H2O -H3PO4"	
Ion series matches for "y -H2O -NH3"	6, 7, 7
Ion series matches for "y -H3PO4"	
Ion series matches for "y -NH3"	1, 2, 3, 5, 6, 7, 8, 9
Ion series matches for "y -NH3 -H3PO4"	

Figure S1.

⁹⁵¹LSALS[79.96633]AGSNEYLR⁹⁶³

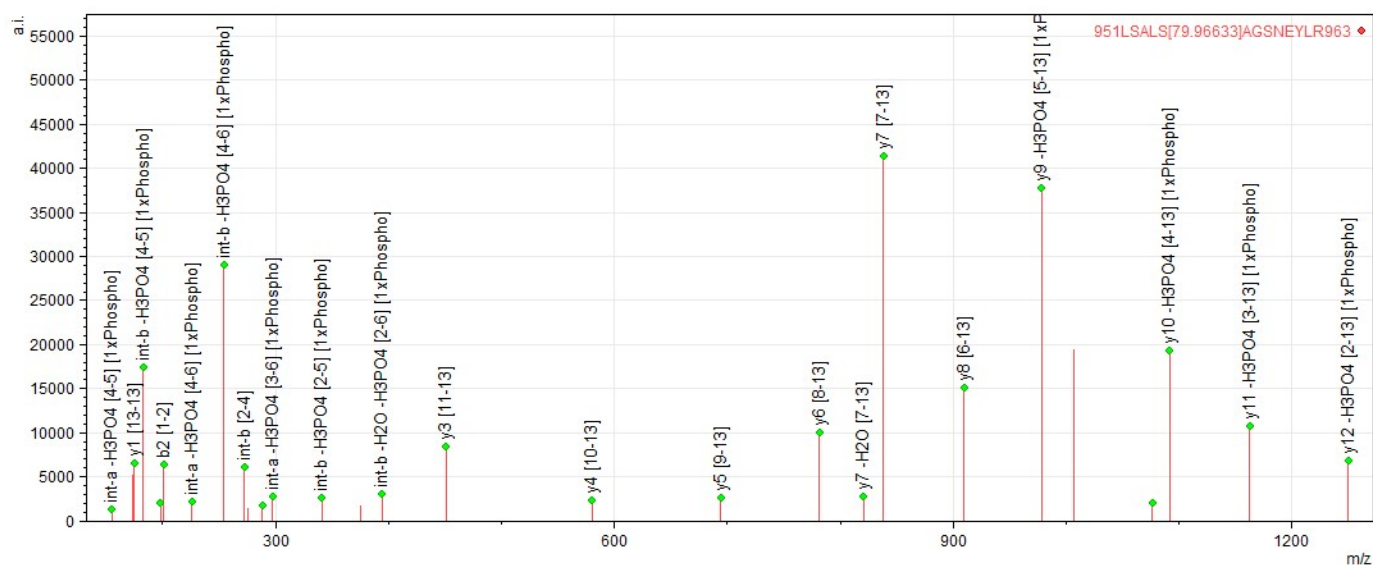


Ser 955

Precursor m/z: 730.8403

Precursor mass error: 3.28 ppm

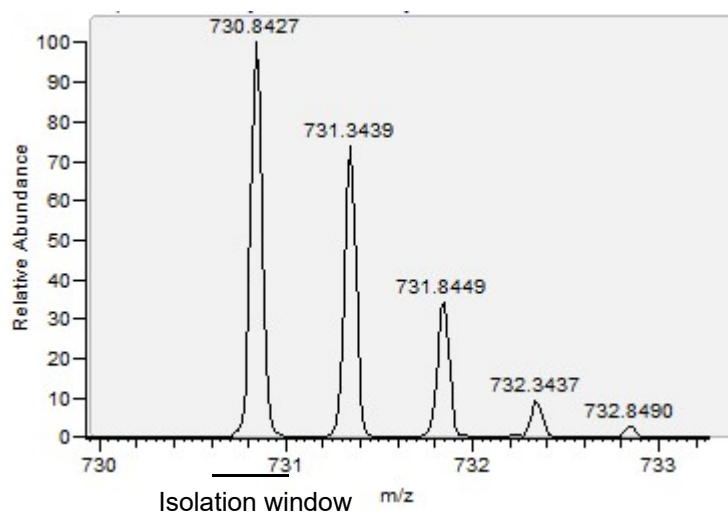
Isolation window



parameter	value
Number of peaks searched	28
Number of fragments searched	1250
Number of fragments matched	35
Intensity matched	90 %
Sequence length	13
Ion serie matches for "b"	2, 3
Ion serie matches for "b -H2O"	2, 3
Ion serie matches for "b -H2O -H3PO4"	6
Ion serie matches for "b -H2O -NH3"	
Ion serie matches for "b -H3PO4"	
Ion serie matches for "b -NH3"	
Ion serie matches for "b -NH3 -H3PO4"	
Ion serie matches for "y"	1, 2, 3, 4, 5, 6, 7, 8, 9
Ion serie matches for "y -H2O"	7
Ion serie matches for "y -H2O -H3PO4"	
Ion serie matches for "y -H2O -NH3"	
Ion serie matches for "y -H3PO4"	9, 10, 11, 12
Ion serie matches for "y -NH3"	
Ion serie matches for "y -NH3 -H3PO4"	

Figure S1.

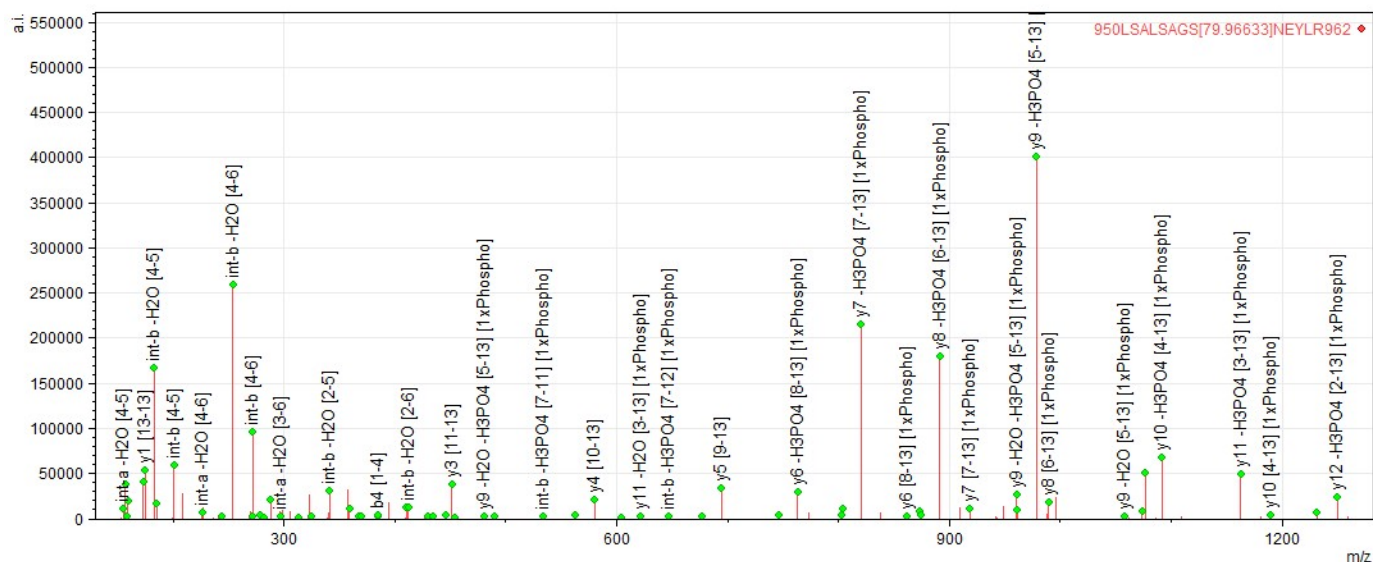
⁹⁵¹LSALSAGS[79.96633]NEYLR⁹⁶³



Ser 958

Precursor m/z: 730.8427

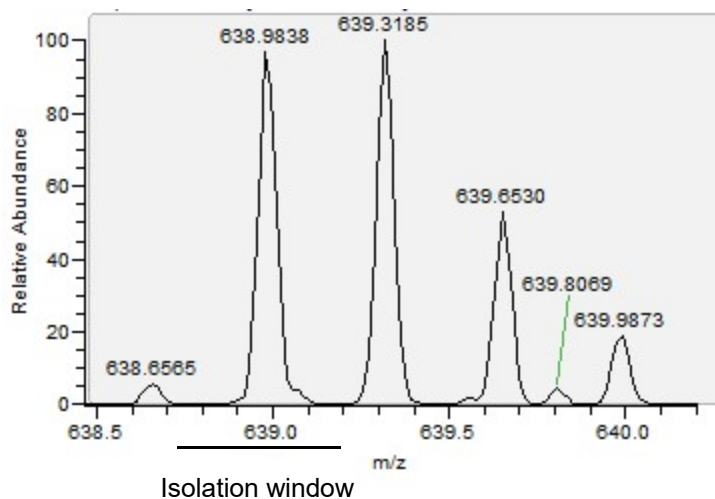
Precursor mass error: 0 ppm



parameter	value
Number of peaks searched	104
Number of fragments searched	1328
Number of fragments matched	82
Intensity matched	88 %
Sequence length	13
Ion serie matches for "b"	2, 3, 4, 6
Ion serie matches for "b -H2O"	2, 3, 4, 5
Ion serie matches for "b -H2O -H3PO4"	
Ion serie matches for "b -H2O -NH3"	
Ion serie matches for "b -H3PO4"	
Ion serie matches for "b -NH3 -H3PO4"	
Ion serie matches for "y"	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Ion serie matches for "y -H2O"	4, 9, 11
Ion serie matches for "y -H2O -H3PO4"	7, 8, 9, 9, 10, 12
Ion serie matches for "y -H2O -NH3"	
Ion serie matches for "y -H3PO4"	6, 7, 7, 8, 8, 9, 9, 10, 11, 12
Ion serie matches for "y -NH3"	1, 2, 3, 4, 5
Ion serie matches for "y -NH3 -H3PO4"	6, 7, 8, 9

Figure S1.

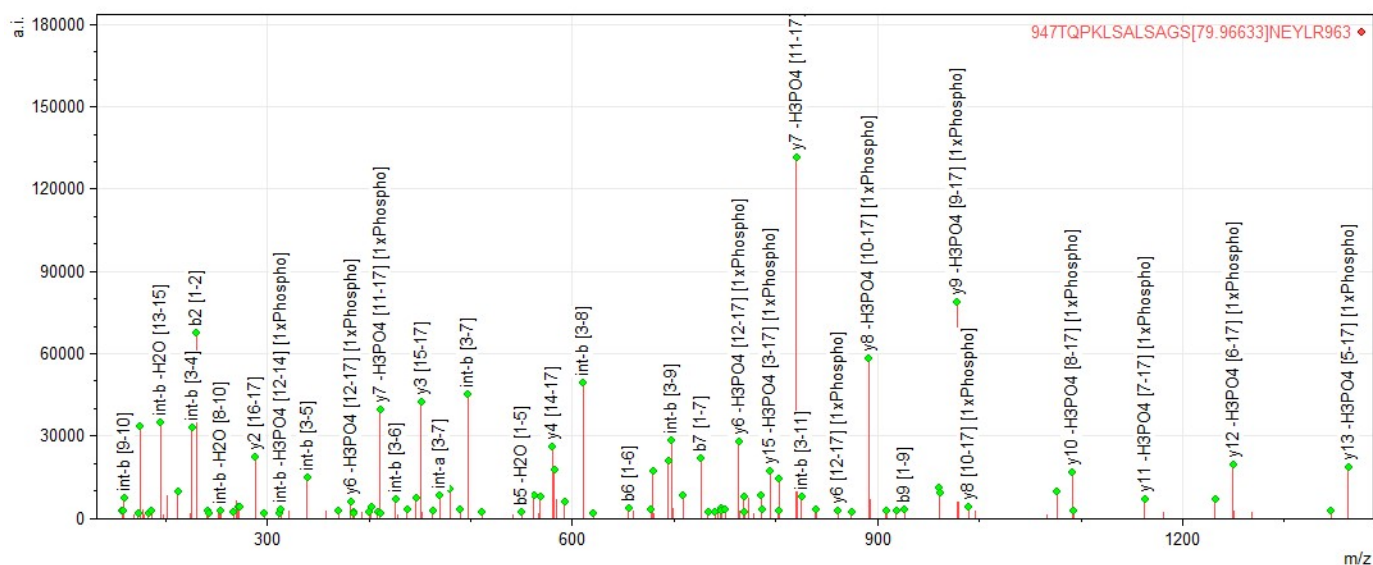
⁹⁴⁷TQPKLSALSAGS[79.96633]NEYLR⁹⁶³



Ser 955/958

Precursor m/z: 638.9838

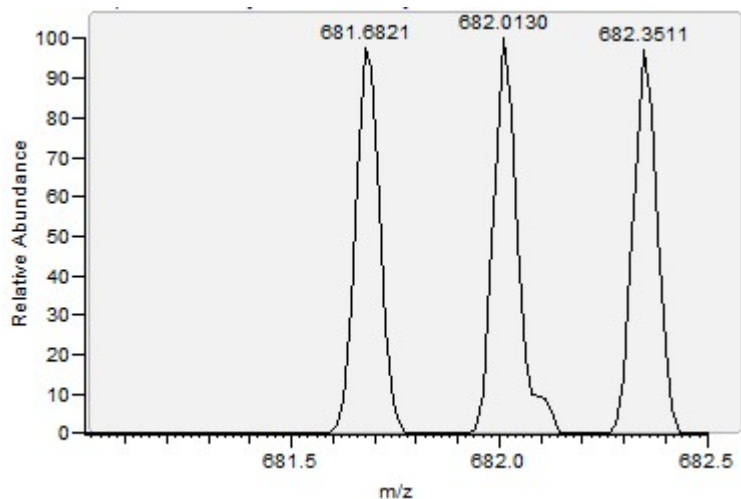
Precursor mass error: -2.50 ppm



parameter	value
Number of peaks searched	127
Number of fragments searched	3588
Number of fragments matched	122
Intensity matched	89 %
Sequence length	17
Ion series matches for "b"	2, 5, 6, 7, 8, 9
Ion series matches for "b -H2O"	2, 5, 7, 9
Ion series matches for "b -H2O -H3PO4"	
Ion series matches for "b -H2O -NH3"	2, 6
Ion series matches for "b -H3PO4"	
Ion series matches for "b -NH3"	12
Ion series matches for "b -NH3 -H3PO4"	
Ion series matches for "y"	1, 2, 3, 4, 5, 6, 7, 8, 9
Ion series matches for "y -H2O"	4
Ion series matches for "y -H2O -H3PO4"	7, 9, 11, 12, 12, 15
Ion series matches for "y -H2O -NH3"	
Ion series matches for "y -H3PO4"	6, 6, 7, 7, 8, 8, 9, 9, 10, 11, 12, 13, 14, 15
Ion series matches for "y -NH3"	1, 2, 5
Ion series matches for "y -NH3 -H3PO4"	6, 7, 7, 8, 8, 9, 13, 15

Figure S1.

⁹⁴⁶KTQPKLSALSAGS[79.96633]NEYLR⁹⁶³

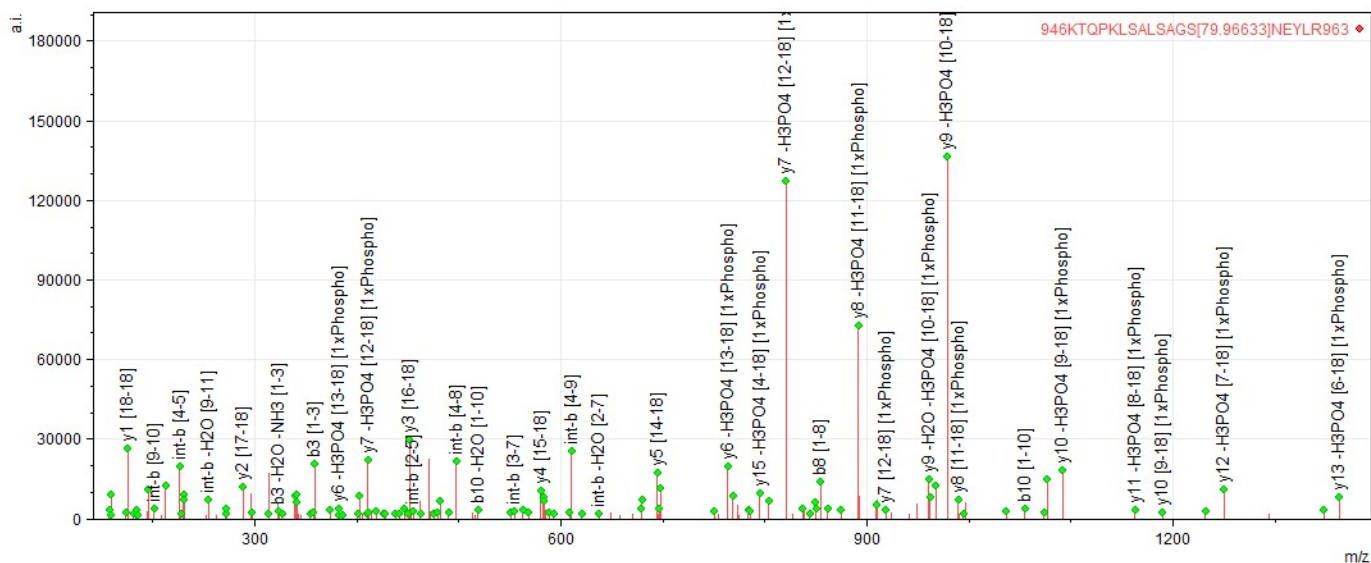


Ser 955/958

Precursor m/z: 681.6821

Precursor mass error: -2.30 ppm

Isolation window



parameter	value
Number of peaks searched	150
Number of fragments searched	4077
Number of fragments matched	147
Intensity matched	83 %
Sequence length	18
Ion serie matches for "b"	2, 3, 4, 5, 6, 7, 8, 8, 9, 10
Ion serie matches for "b -H2O"	2, 3, 6, 8, 8, 9, 10, 10, 11
Ion serie matches for "b -H2O -H3PO4"	
Ion serie matches for "b -H2O -NH3"	2, 3, 8
Ion serie matches for "b -H3PO4"	
Ion serie matches for "b -NH3"	3, 6, 6
Ion serie matches for "b -NH3 -H3PO4"	
Ion serie matches for "y"	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 15
Ion serie matches for "y -H2O"	4
Ion serie matches for "y -H2O -H3PO4"	9, 10, 11, 12, 12, 15, 16
Ion serie matches for "y -H2O -NH3"	
Ion serie matches for "y -H3PO4"	6, 6, 7, 7, 8, 8, 9, 9, 10, 11, 12, 13, 15, 17
Ion serie matches for "y -NH3"	1, 2
Ion serie matches for "y -NH3 -H3PO4"	6, 7, 7, 8, 8, 9, 9, 16

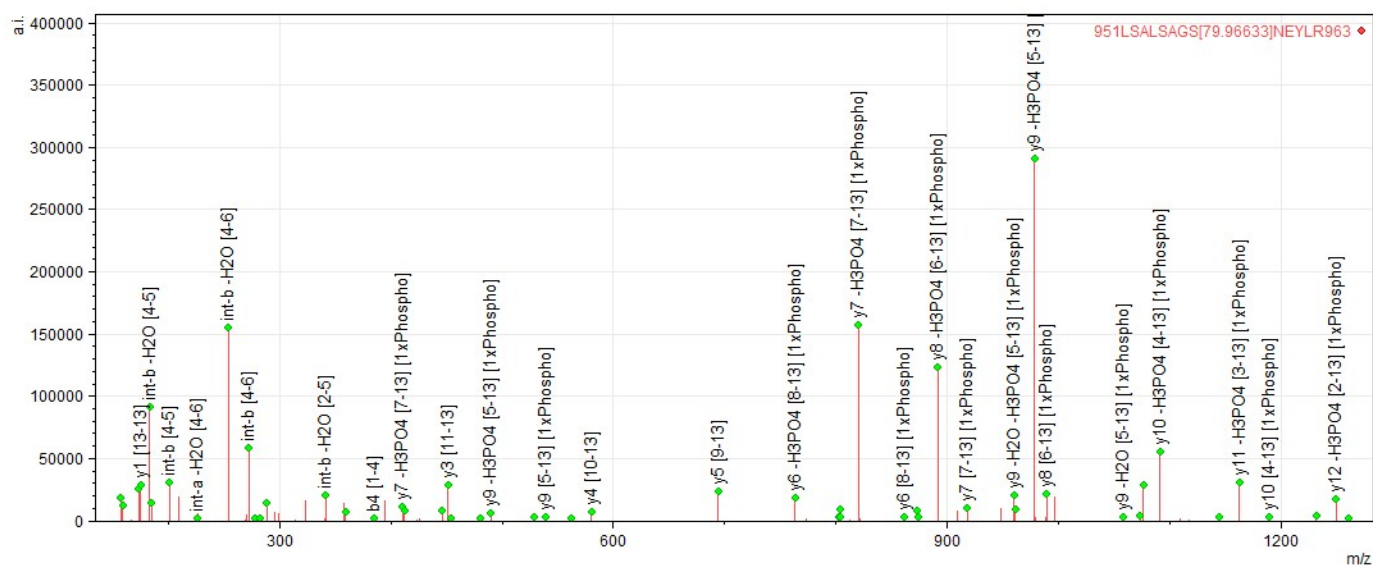
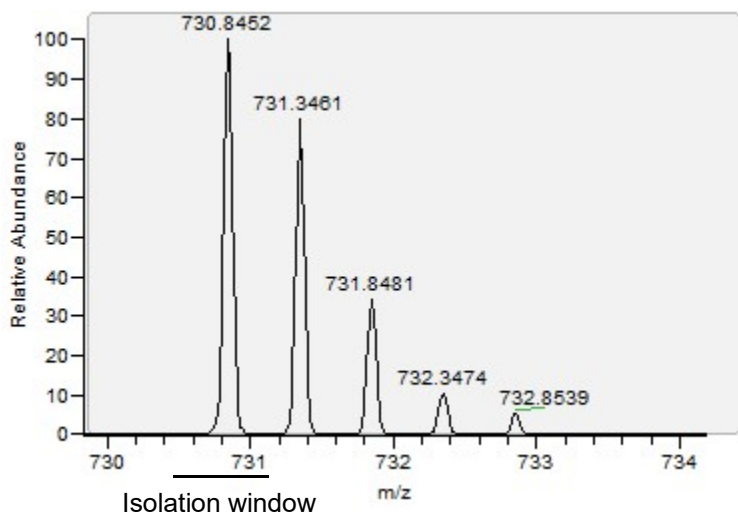
Figure S1.

⁹⁵¹LSALSAGS[79.96633]NEYLR⁹⁶³

Ser 955/958

Precursor m/z: 730.8452

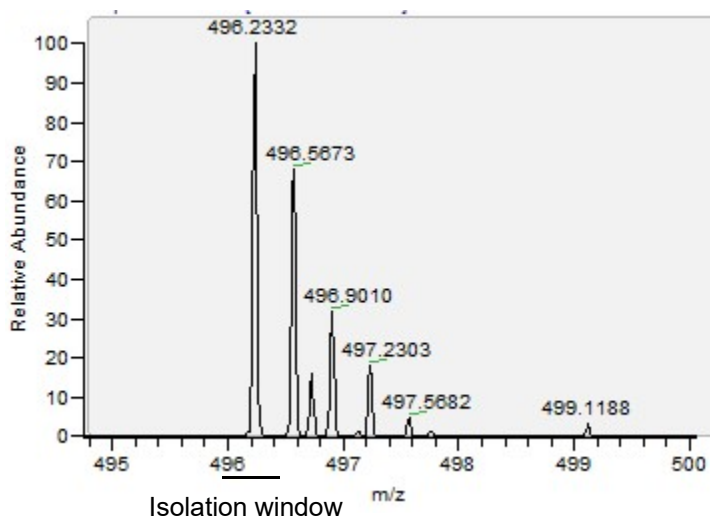
Precursor mass error: -3.42 ppm



parameter	value
Number of peaks searched	78
Number of fragments searched	1328
Number of fragments matched	66
Intensity matched	89 %
Sequence length	13
Ion serie matches for "b"	2, 3, 4, 6
Ion serie matches for "b -H2O"	2, 3, 5
Ion serie matches for "b -H2O -H3PO4"	
Ion serie matches for "b -H2O -NH3"	
Ion serie matches for "b -H3PO4"	
Ion serie matches for "b -NH3"	
Ion serie matches for "b -NH3 -H3PO4"	
Ion serie matches for "y"	1, 2, 3, 4, 5, 6, 7, 8, 9, 9, 10, 11
Ion serie matches for "y -H2O"	4, 9
Ion serie matches for "y -H2O -H3PO4"	7, 8, 9, 9, 10, 11, 12
Ion serie matches for "y -H2O -NH3"	
Ion serie matches for "y -H3PO4"	6, 7, 7, 8, 8, 9, 9, 10, 11, 12
Ion serie matches for "y -NH3"	4
Ion serie matches for "y -NH3 -H3PO4"	7, 8, 9

Figure S1.

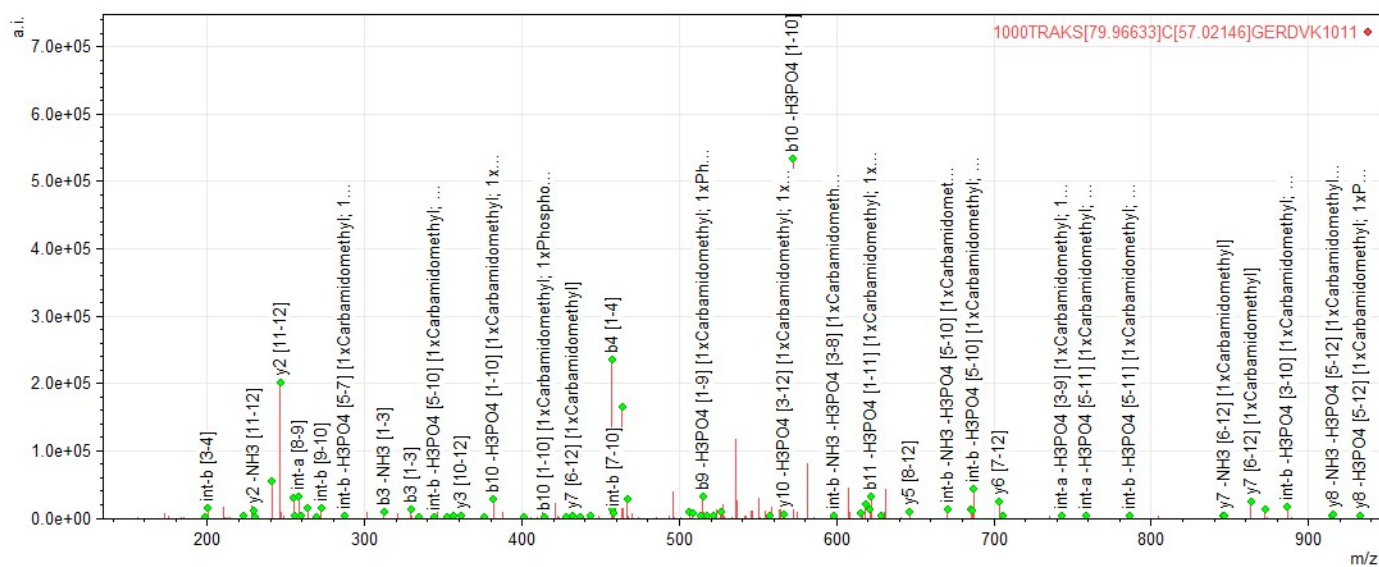
1000TRAKS[79.96633]C[57.02146]GERDVK1011



Thr 1000/S1004

Precursor m/z: 496.2332

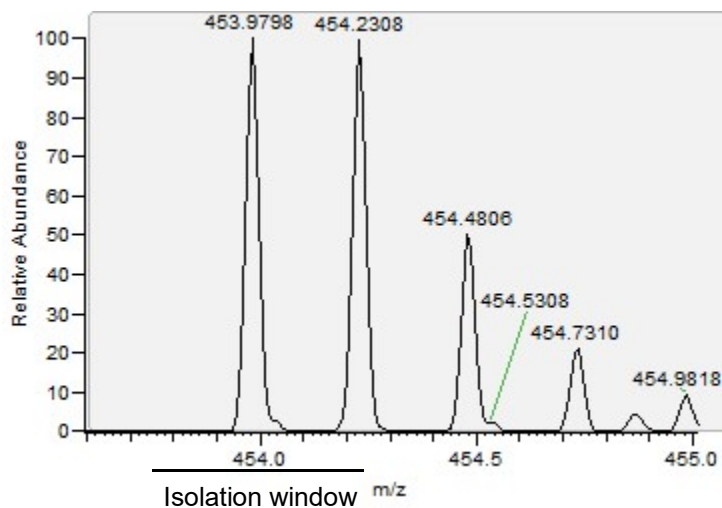
Precursor mass error: -1.21 ppm



parameter	value
Number of peaks searched	170
Number of fragments searched	1845
Number of fragments matched	84
Intensity matched	62 %
Sequence length	12
Ion serie matches for "b"	2, 3, 4, 10, 10
Ion serie matches for "b -H2O"	
Ion serie matches for "b -H2O -H3PO4"	5, 5, 6, 8, 10
Ion serie matches for "b -H2O -NH3"	2
Ion serie matches for "b -H3PO4"	5, 5, 6, 7, 8, 8, 9, 10, 10, 11
Ion serie matches for "b -NH3"	2, 3
Ion serie matches for "b -NH3 -H3PO4"	9, 10, 10
Ion serie matches for "y"	2, 3, 4, 4, 5, 6, 6, 7, 7
Ion serie matches for "y -H2O"	5, 6, 7
Ion serie matches for "y -H2O -H3PO4"	8, 9, 10
Ion serie matches for "y -H2O -NH3"	6
Ion serie matches for "y -H3PO4"	8, 8, 10
Ion serie matches for "y -NH3"	2, 6, 7
Ion serie matches for "y -NH3 -H3PO4"	8, 8

Figure S1.

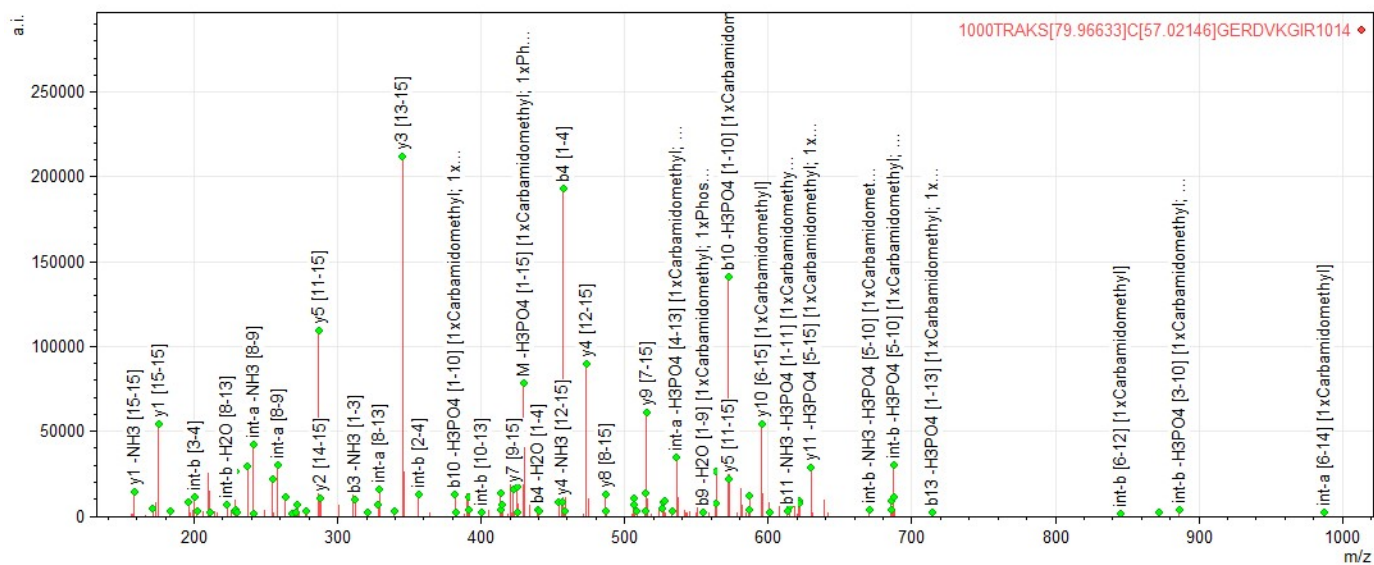
1000TRAKS[79.96633]C[57.02146]GERDVKGIR¹⁰¹⁴



Thr 1000/S1004

Precursor m/z: 453.9788

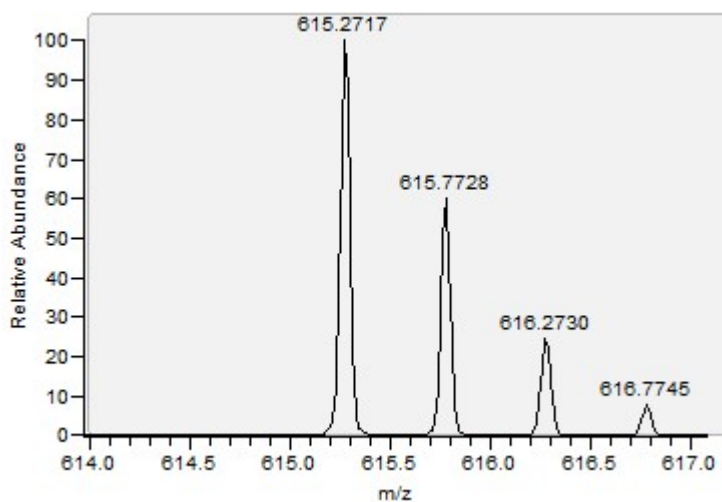
Precursor mass error: -1.93 ppm



parameter	value
Number of peaks searched	168
Number of fragments searched	3824
Number of fragments matched	103
Intensity matched	77 %
Sequence length	15
Ion serie matches for "b"	2, 3, 4, 4, 9, 13
Ion serie matches for "b -H2O"	4, 9
Ion serie matches for "b -H2O -H3PO4"	5, 5, 10
Ion serie matches for "b -H2O -NH3"	2
Ion serie matches for "b -H3PO4"	5, 5, 8, 9, 10, 10, 11, 12, 13, 14
Ion serie matches for "b -NH3"	2, 3, 4
Ion serie matches for "b -NH3 -H3PO4"	9, 10, 11
Ion serie matches for "y"	1, 2, 3, 4, 4, 5, 5, 6, 7, 8, 9, 10
Ion serie matches for "y -H2O"	7, 10, 10
Ion serie matches for "y -H2O -H3PO4"	
Ion serie matches for "y -H2O -NH3"	
Ion serie matches for "y -H3PO4"	11, 11, 13
Ion serie matches for "y -NH3"	1, 2, 3, 4, 4, 5, 7, 9, 10, 10
Ion serie matches for "y -NH3 -H3PO4"	11, 11, 12, 14

Figure S1.

1002AKS[79.96633]C[57.02146]GERDVK1011

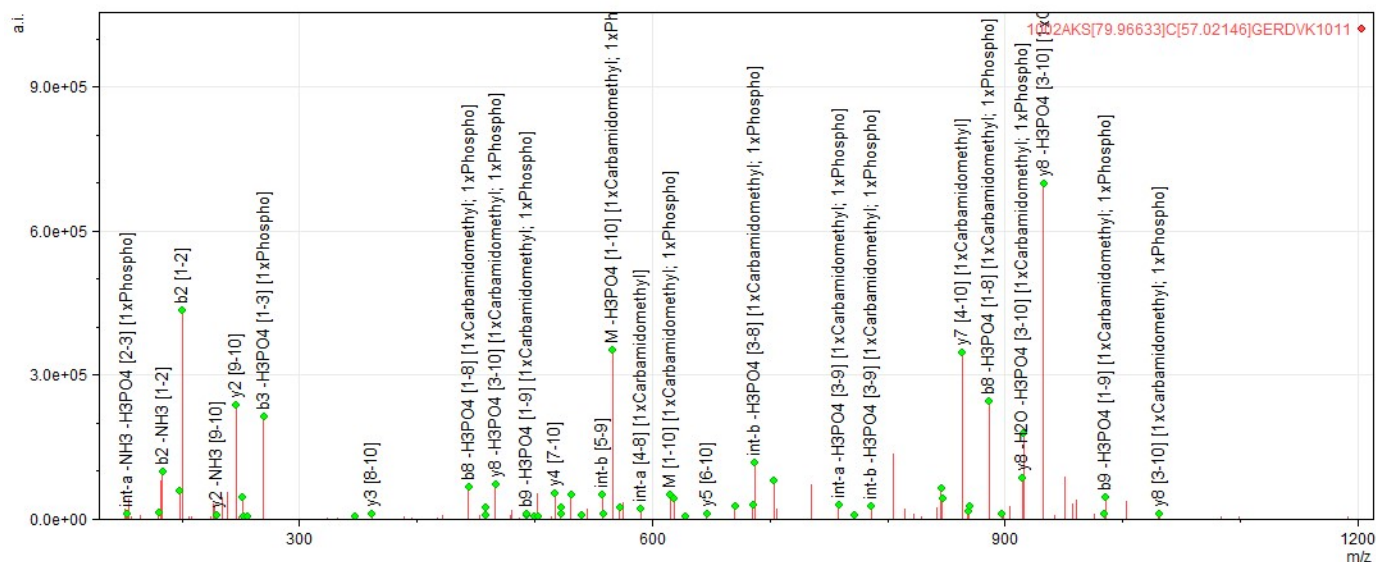


Ser 1004

Precursor m/z: 615.2717

Precursor mass error: -1.38 ppm

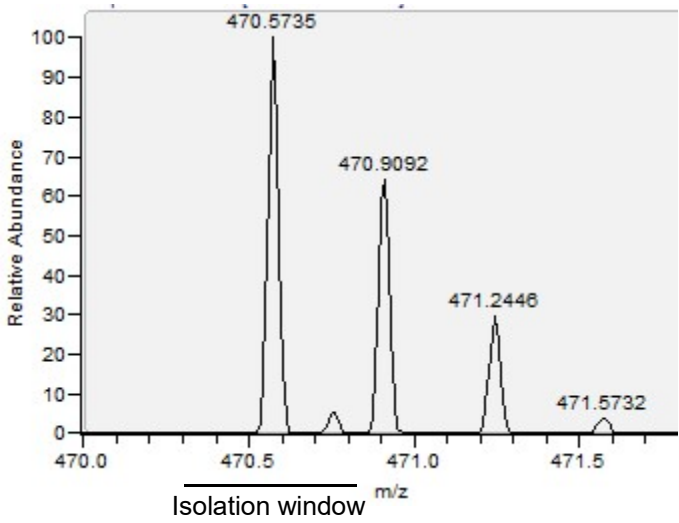
Isolation window



parameter	value
Number of peaks searched	106
Number of fragments searched	758
Number of fragments matched	60
Intensity matched	78 %
Sequence length	10
Ion serie matches for "b"	2, 8, 8
Ion serie matches for "b -H2O"	
Ion serie matches for "b -H2O -H3PO4"	3, 8
Ion serie matches for "b -H2O -NH3"	
Ion serie matches for "b -H3PO4"	3, 7, 8, 8, 9, 9
Ion serie matches for "b -NH3"	2
Ion serie matches for "b -NH3 -H3PO4"	3, 8
Ion serie matches for "y"	2, 3, 4, 5, 6, 7, 8
Ion serie matches for "y -H2O"	4, 5, 6, 7
Ion serie matches for "y -H2O -H3PO4"	8, 8, 9
Ion serie matches for "y -H2O -NH3"	
Ion serie matches for "y -H3PO4"	8, 8, 9
Ion serie matches for "y -NH3"	2, 7
Ion serie matches for "y -NH3 -H3PO4"	8, 8, 9

Figure S1.

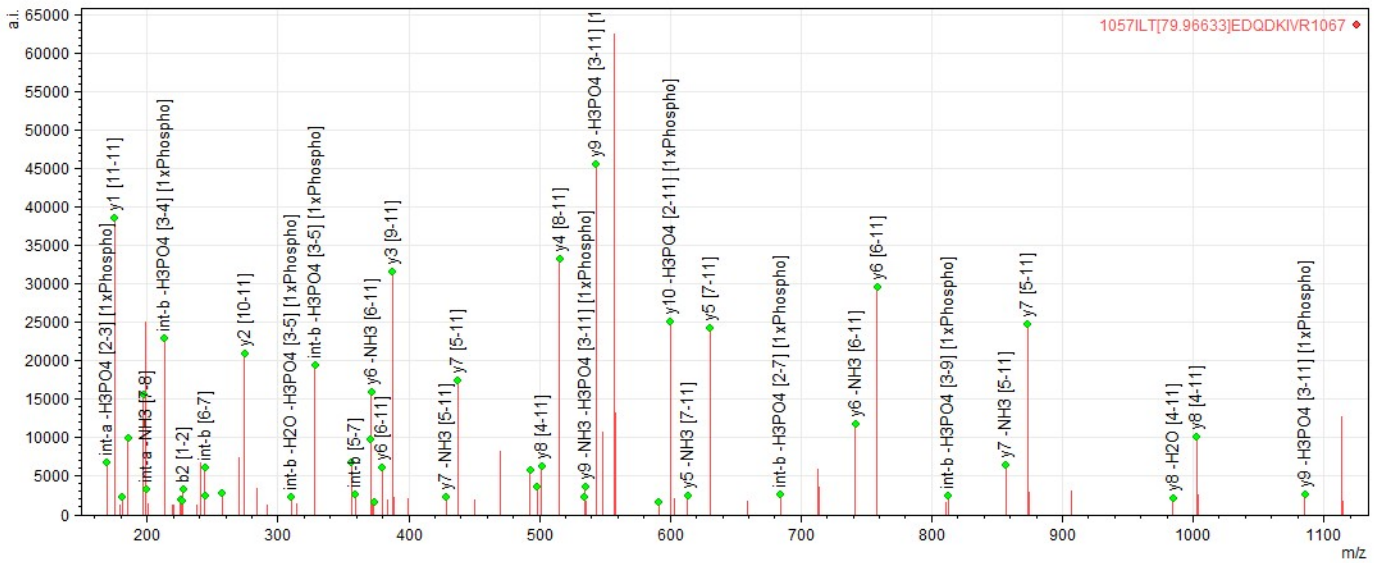
¹⁰⁵⁷ILT[79.96633]EDQDKIVR¹⁰⁶⁷



Thr 1059

Precursor m/z: 470.5735

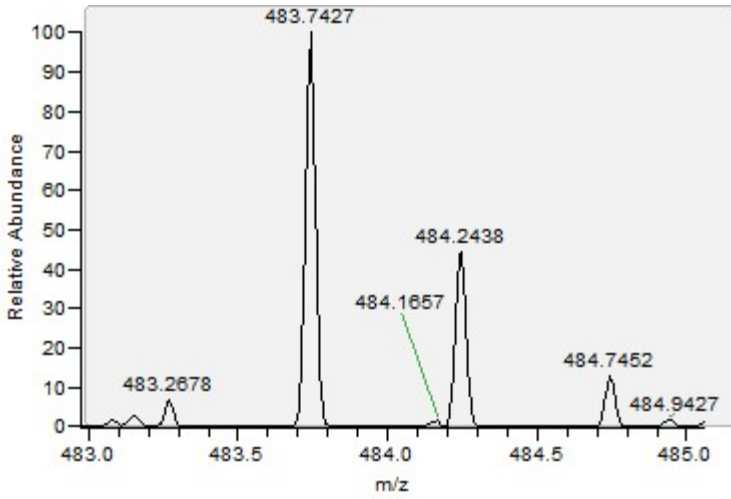
Precursor mass error: -1.70 ppm



parameter	value
Number of peaks searched	81
Number of fragments searched	1326
Number of fragments matched	51
Intensity matched	69 %
Sequence length	11
Ion serie matches for "b"	2
Ion serie matches for "b -H2O"	
Ion serie matches for "b -H2O -H3PO4"	
Ion serie matches for "b -H2O -NH3"	
Ion serie matches for "b -H3PO4"	
Ion serie matches for "b -NH3"	
Ion serie matches for "b -NH3 -H3PO4"	
Ion serie matches for "y"	1, 2, 3, 4, 5, 6, 6, 7, 7, 8, 8
Ion serie matches for "y -H2O"	6, 8, 8
Ion serie matches for "y -H2O -H3PO4"	9
Ion serie matches for "y -H2O -NH3"	
Ion serie matches for "y -H3PO4"	9, 9, 10
Ion serie matches for "y -NH3"	2, 4, 5, 6, 6, 7, 7
Ion serie matches for "y -NH3 -H3PO4"	9, 10

Figure S1.

$^{1240}\text{S}[79.96633]\text{LNVQLGR}^{1247}$

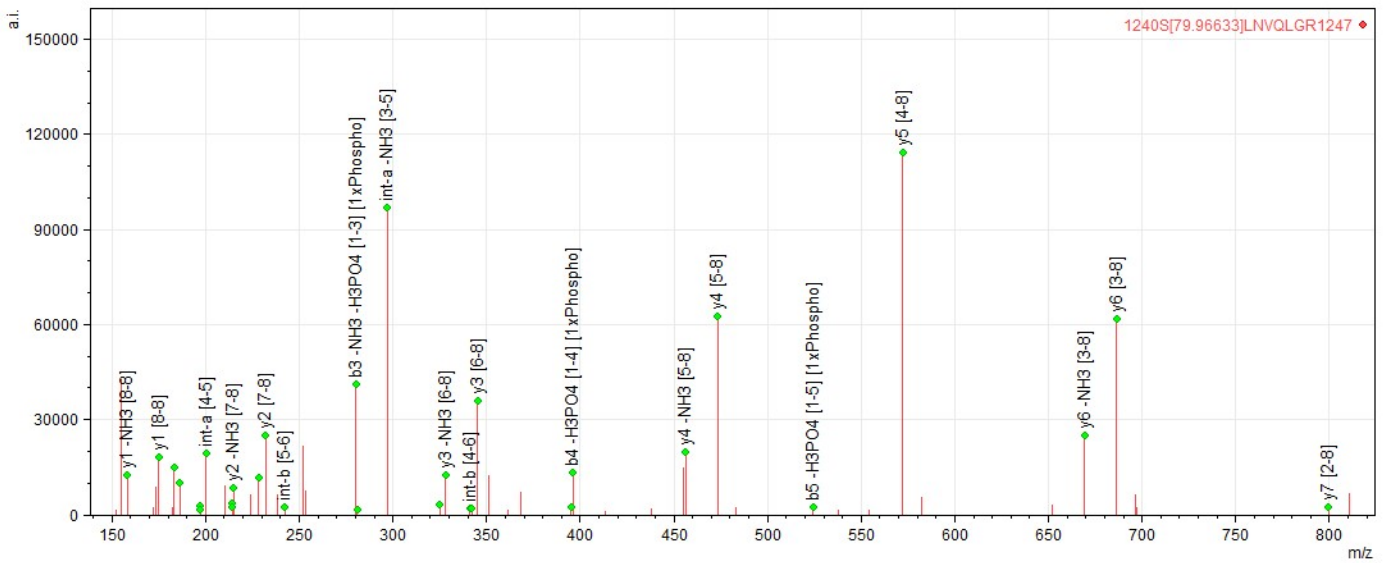


Ser 1240

Precursor m/z: 483.7427

Precursor mass error: -1.34 ppm

Isolation window



parameter	value
Number of peaks searched	55
Number of fragments searched	262
Number of fragments matched	37
Intensity matched	77 %
Sequence length	8
Ion serie matches for "b"	2, 3
Ion serie matches for "b -H2O"	
Ion serie matches for "b -H2O -H3PO4"	
Ion serie matches for "b -H2O -NH3"	
Ion serie matches for "b -H3PO4"	2, 3, 4, 5
Ion serie matches for "b -NH3"	
Ion serie matches for "b -NH3 -H3PO4"	3
Ion serie matches for "y"	1, 2, 3, 4, 5, 6, 7
Ion serie matches for "y -NH3"	1, 2, 3, 4, 6

Figure S1.

Figure S2. Graphs of all detected and quantified ASK1 phosphopeptides in the HNE treated cells. For each concentration point (10 and 50 μM) the peptide peak area was compared against the peptide peak area for the control sample (0 μM). Graphs are shown for (A) Ser 83 (B) Thr 947|Ser 952 (C) Ser 955|Ser 958 (D) Thr 1000|Ser 1004 (E) Thr 1059 (F) Ser 1240.

A

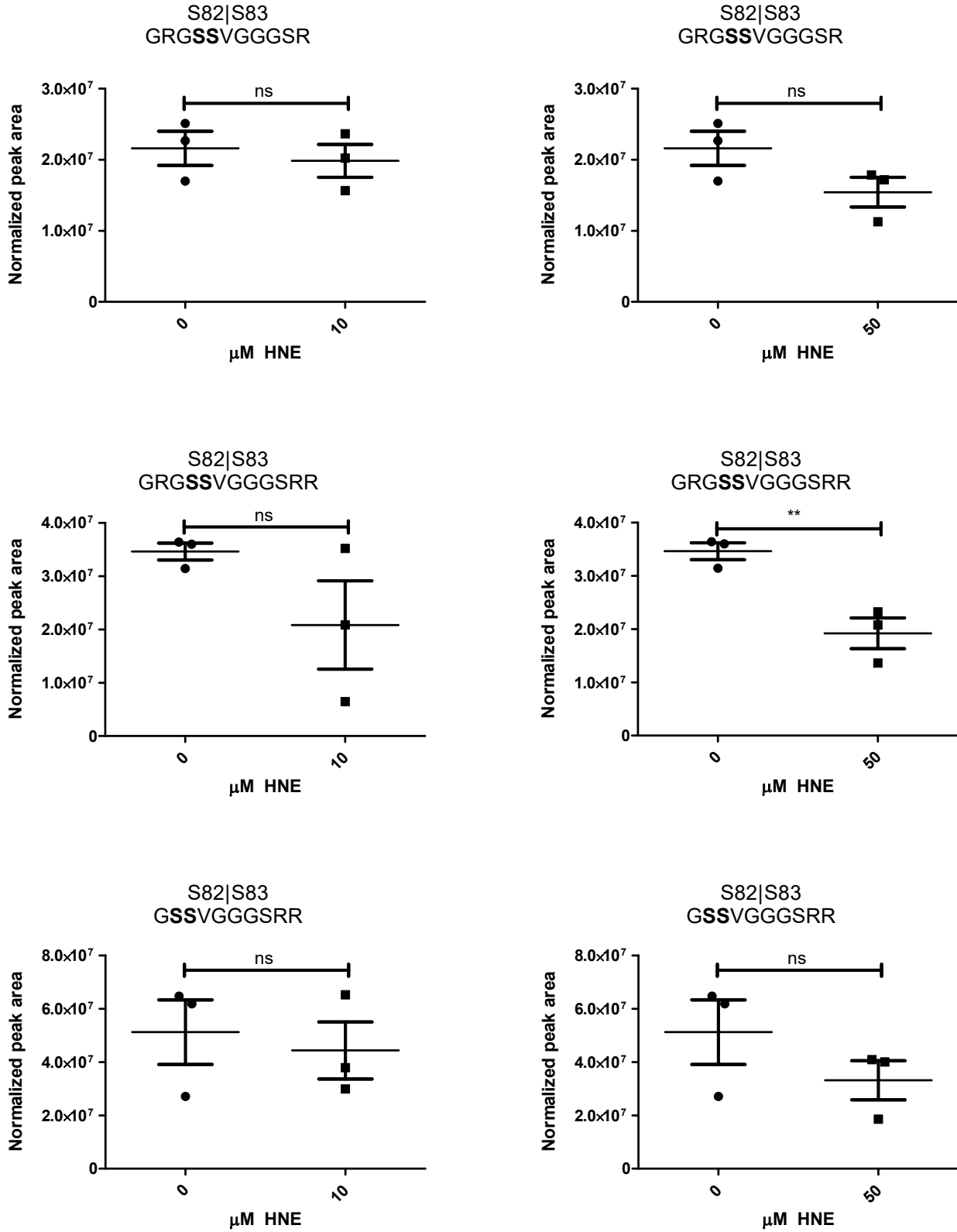
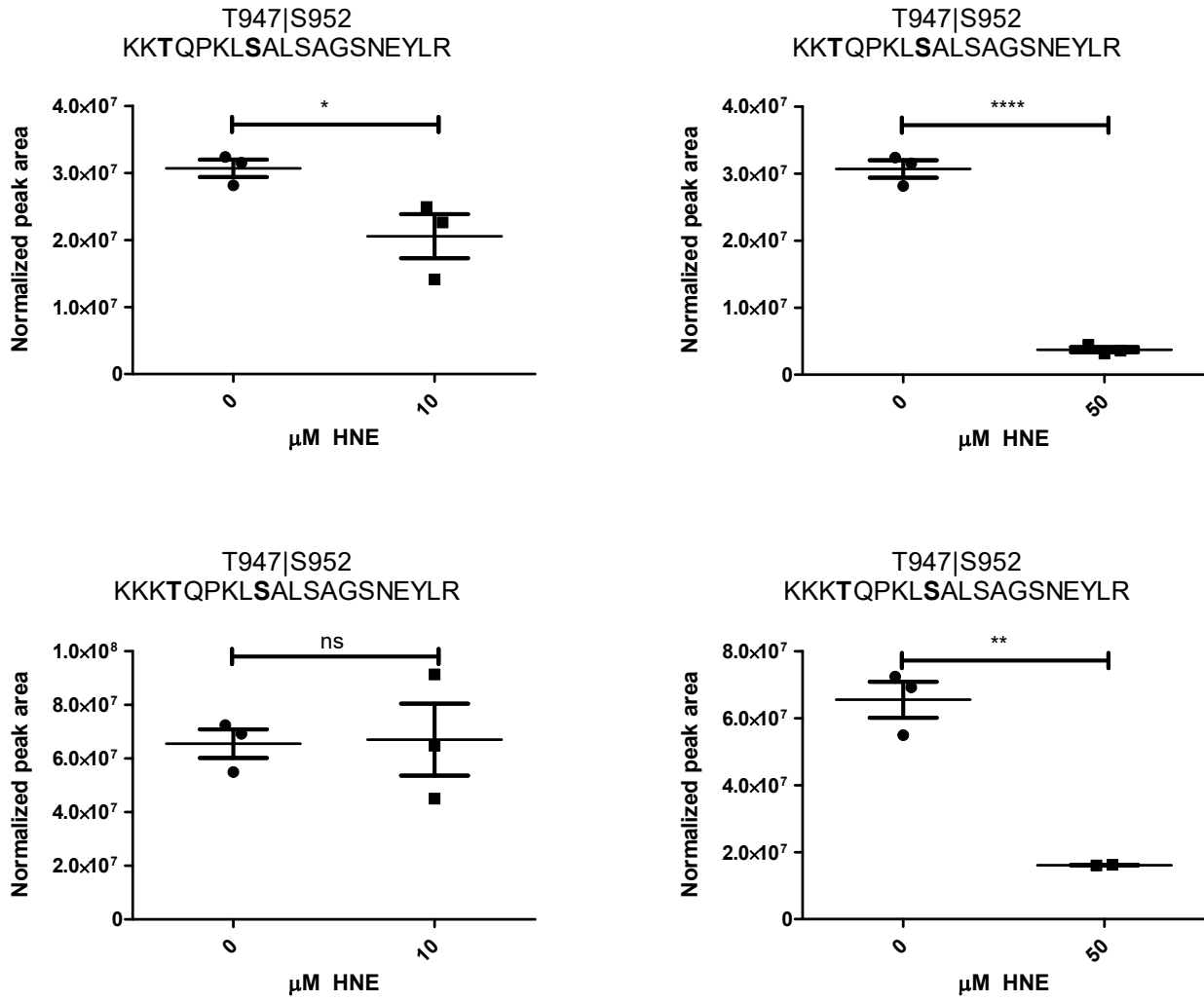


Figure S2.

B



C

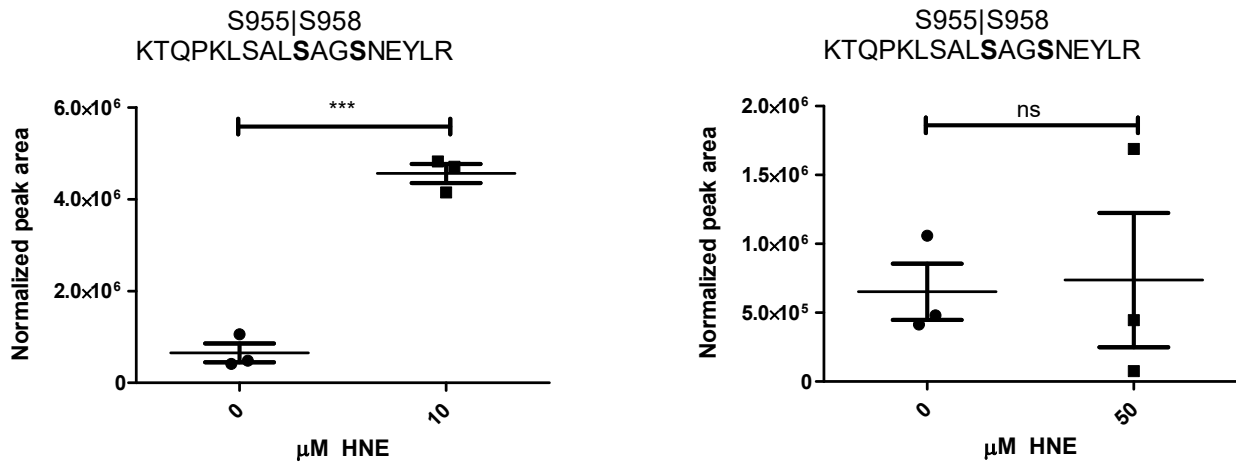
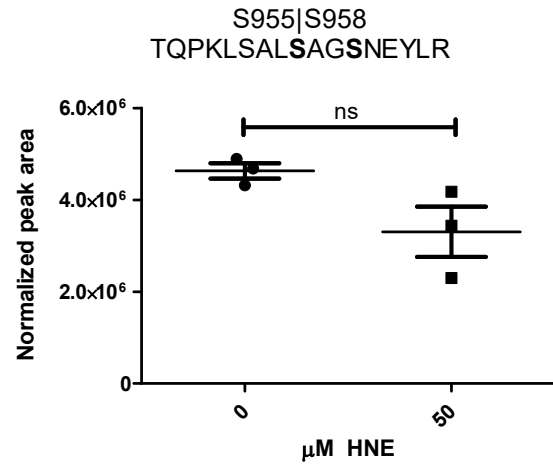
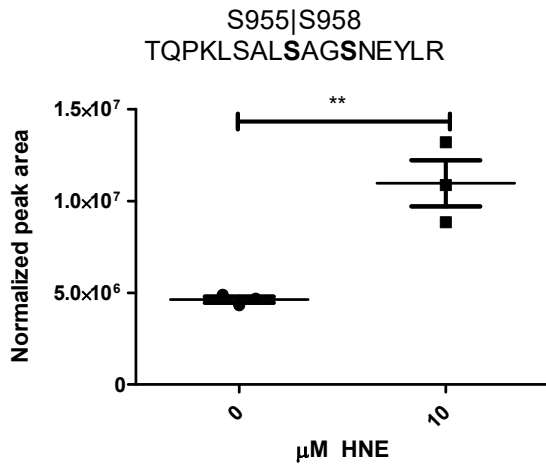
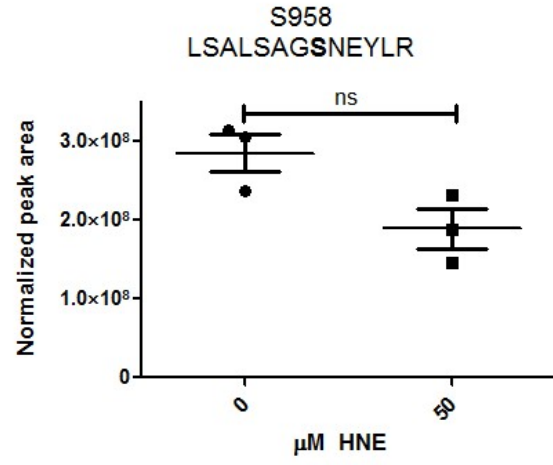
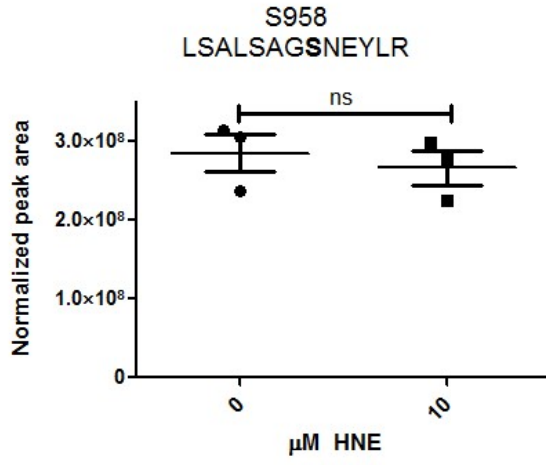


Figure S2.

C



D

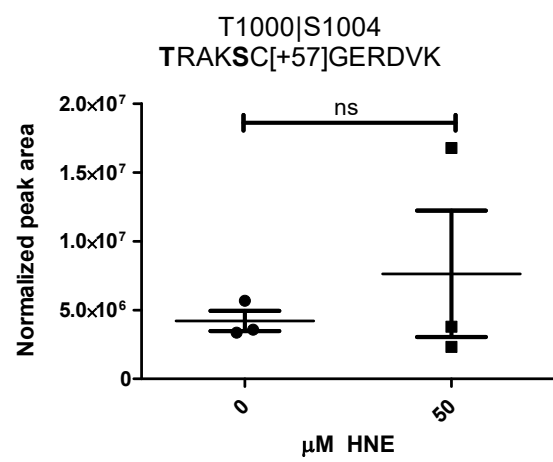
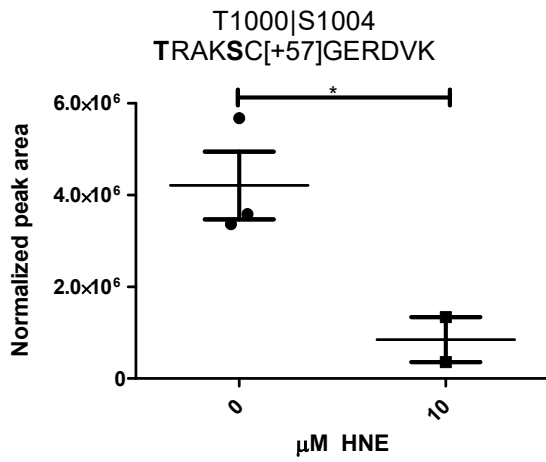
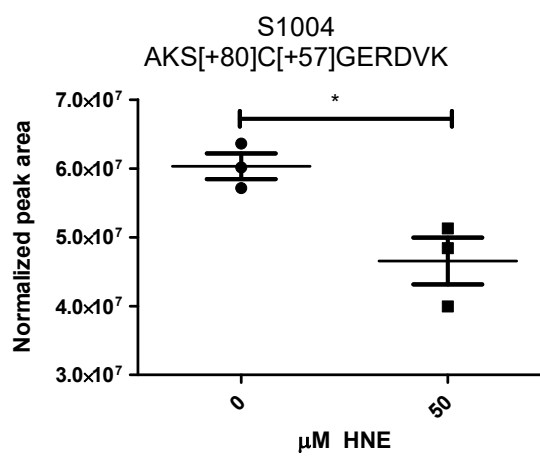
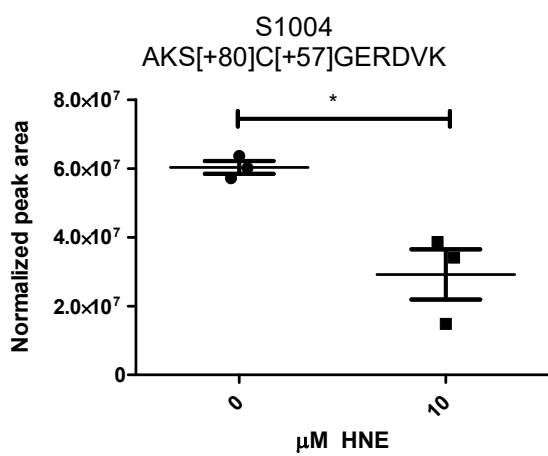
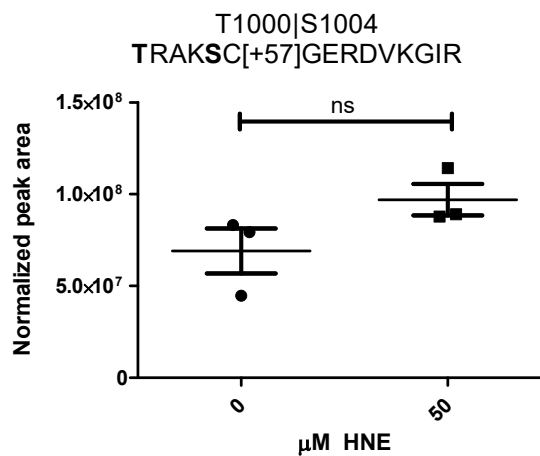
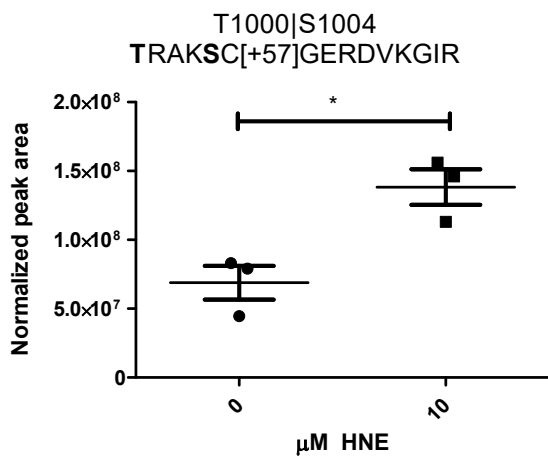


Figure S2.

D



E

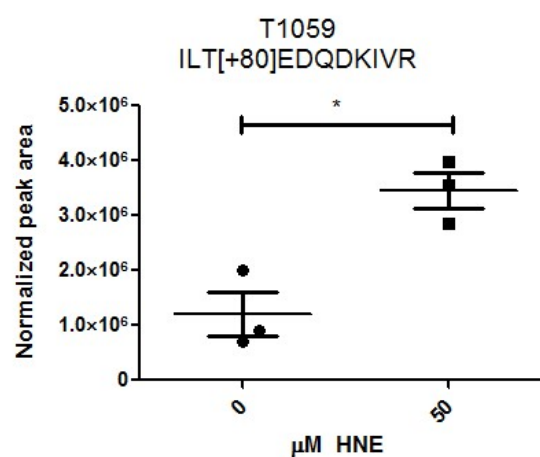
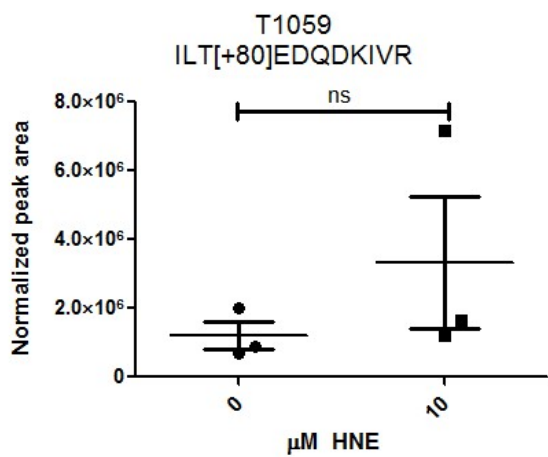


Figure S2.

F

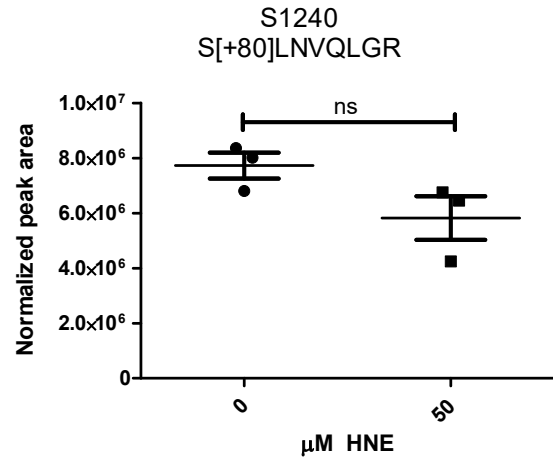
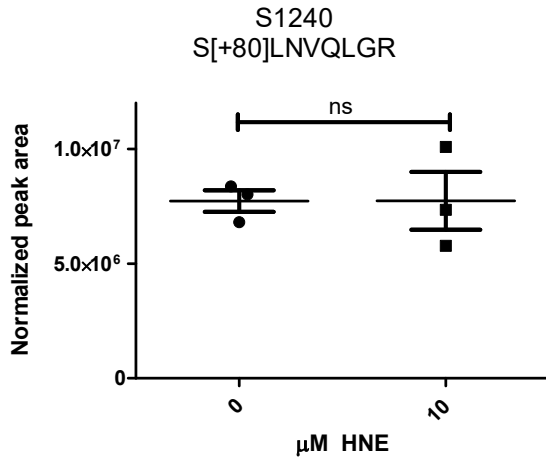


Figure S2.

Figure S3. Graphs of all detected and quantified ASK1 phosphopeptides in the H₂O₂ treated cells. For each concentration point (500 and 5000 μM) the peptide peak area was compared against the peptide peak area for the control sample (0 μM). Graphs are shown for (A) Ser 83 (B) Thr 140|Thr 141 (C) Ser 268|Ser 269 (D) Tyr 355 (E) Thr 947|Ser 952 (F) Ser 955 (G) Ser 958 (H) Ser 1004 (I) Ser 1240.

A

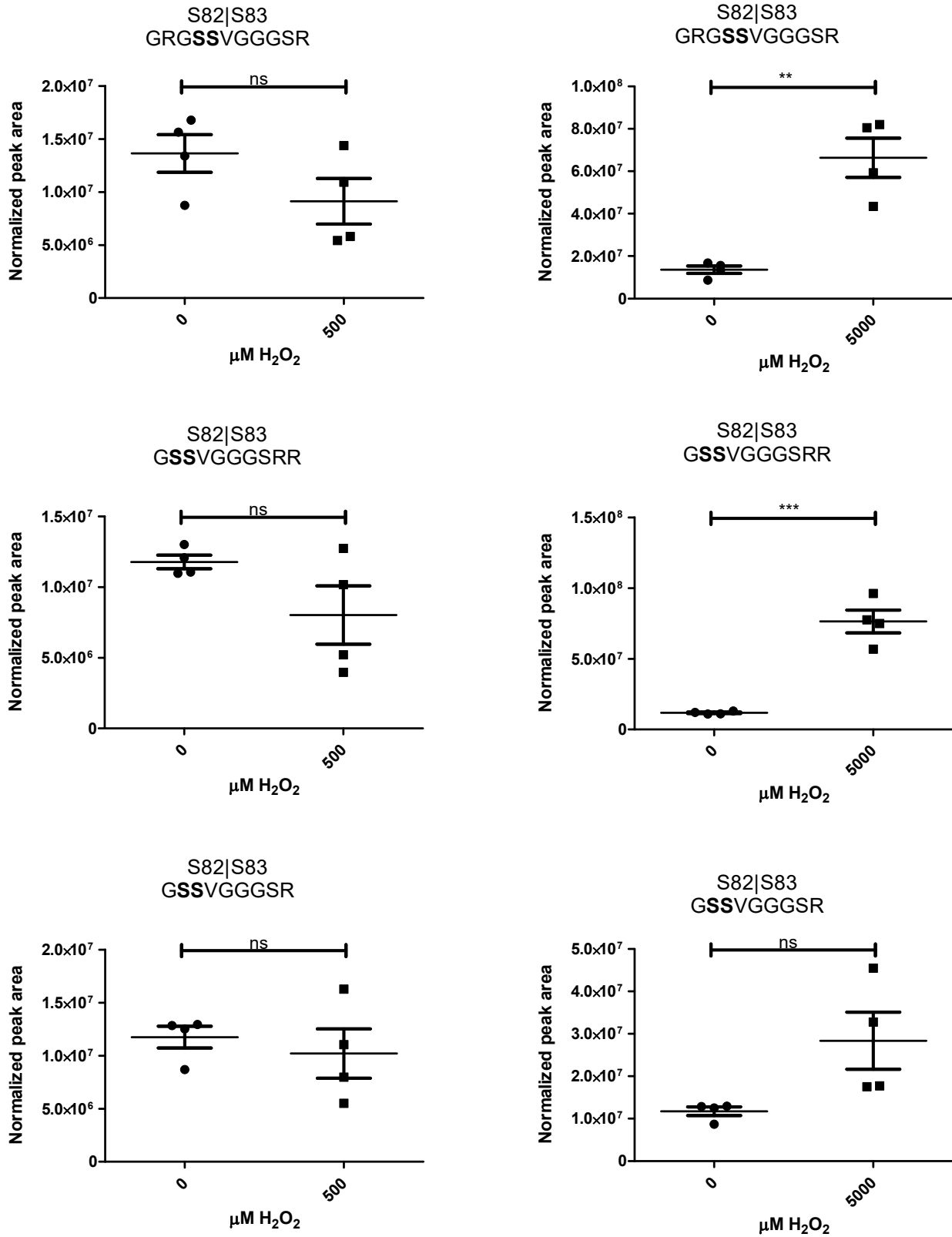
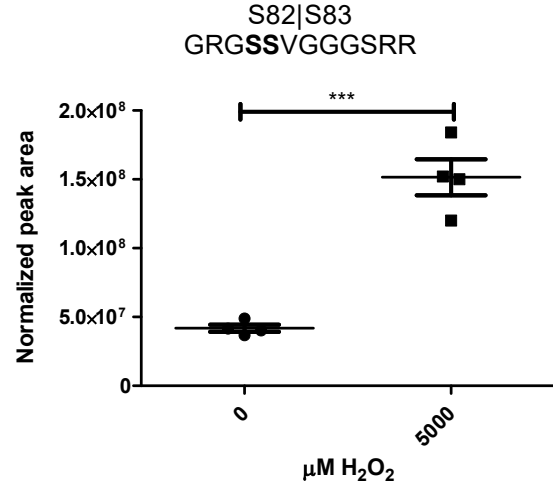
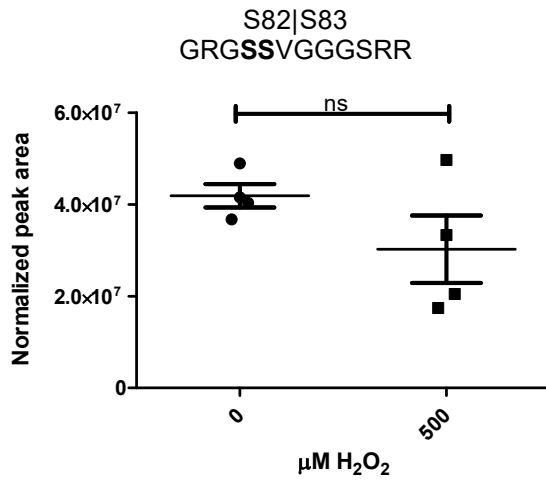
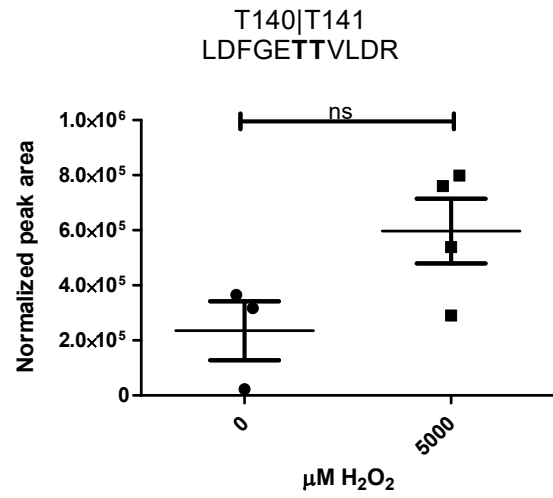
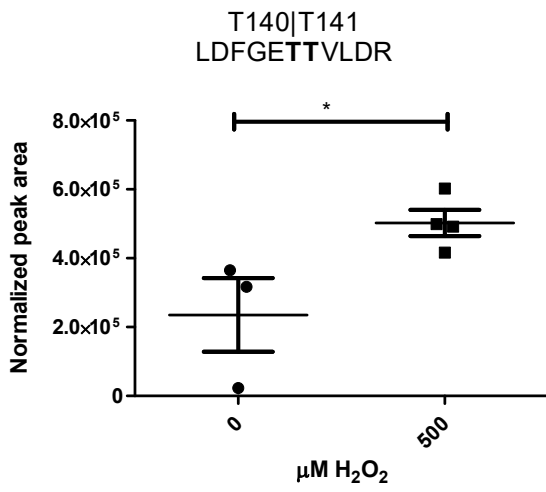


Figure S3.

A



B



C

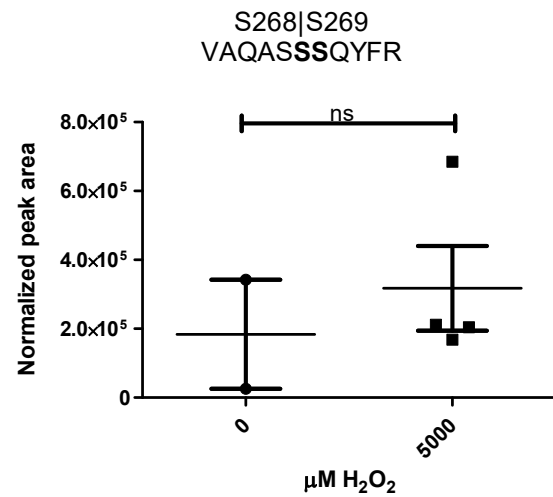
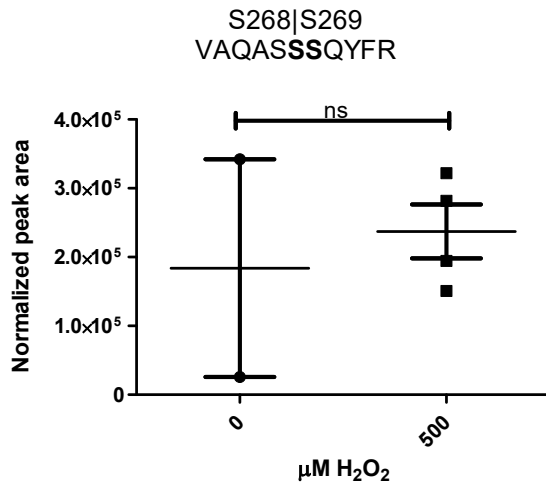
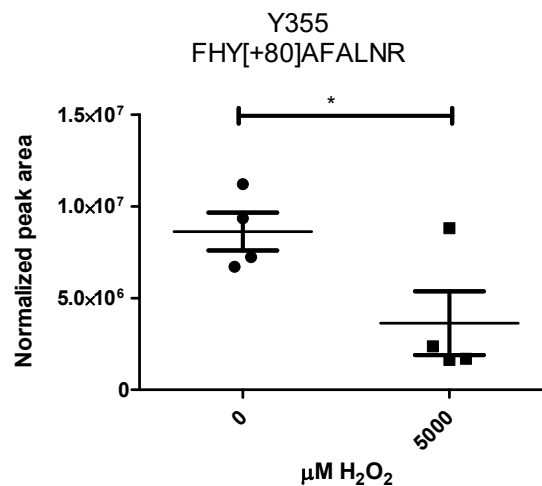
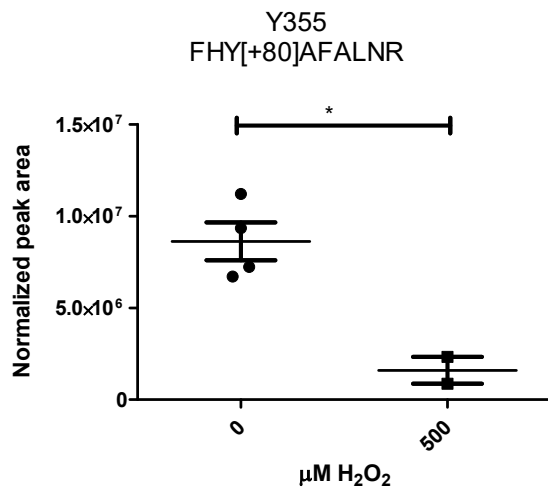
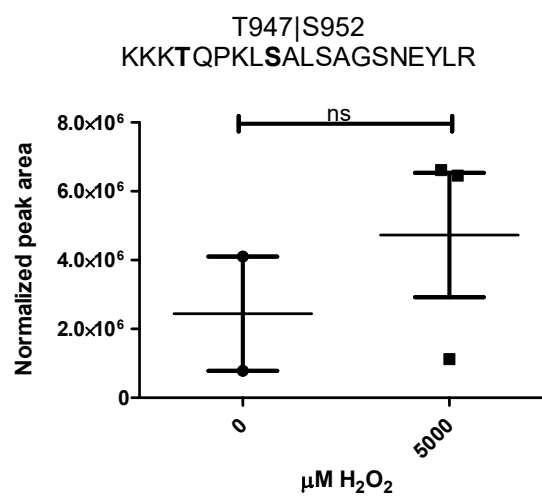
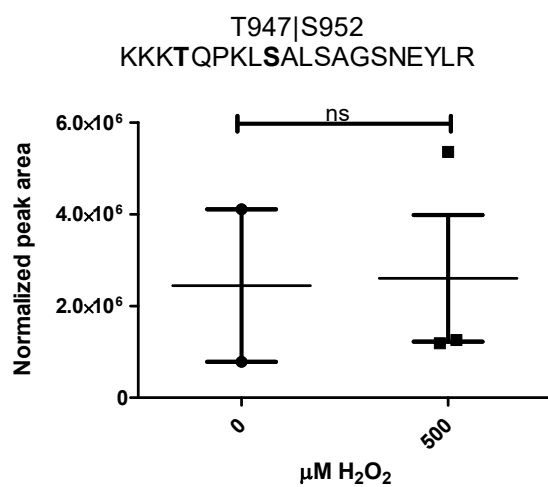


Figure S3.

D



E



F

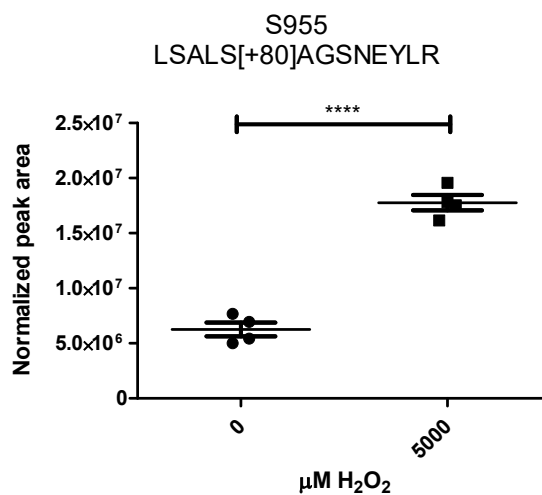
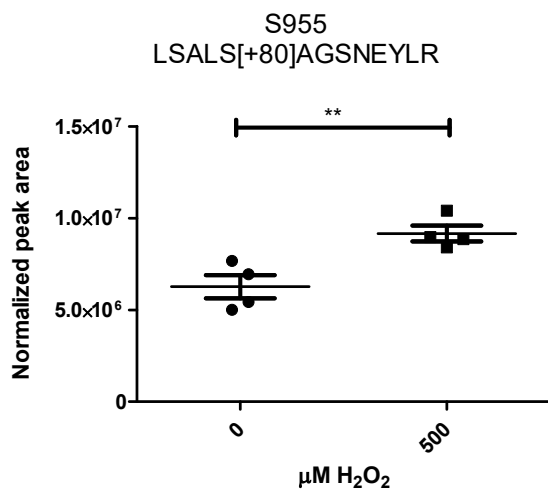
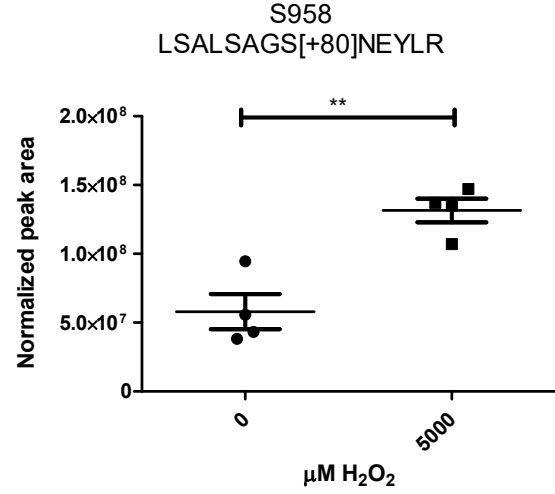
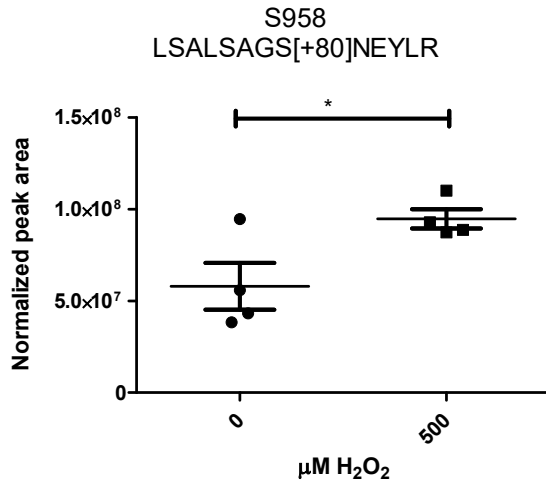
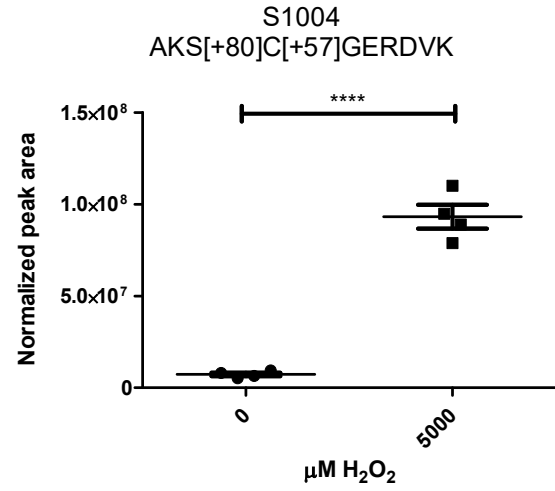
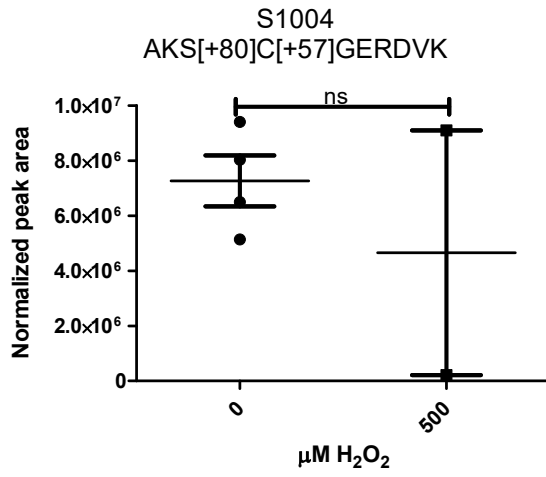


Figure S3.

G



H



I

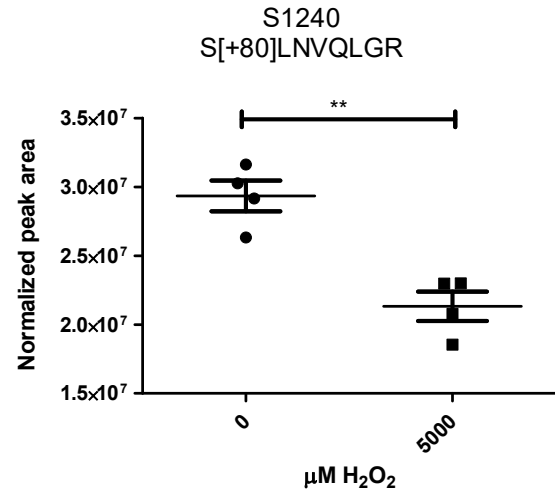
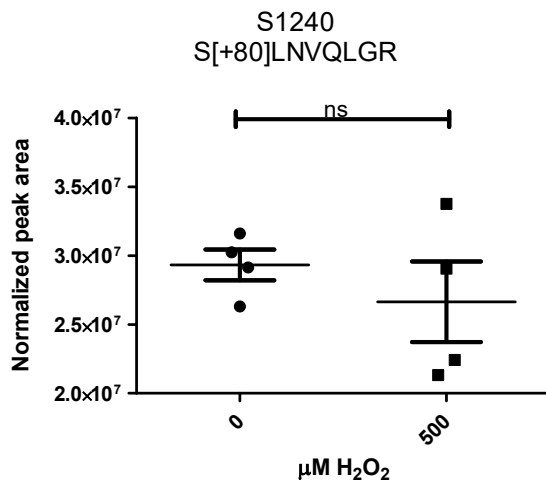


Figure S3.