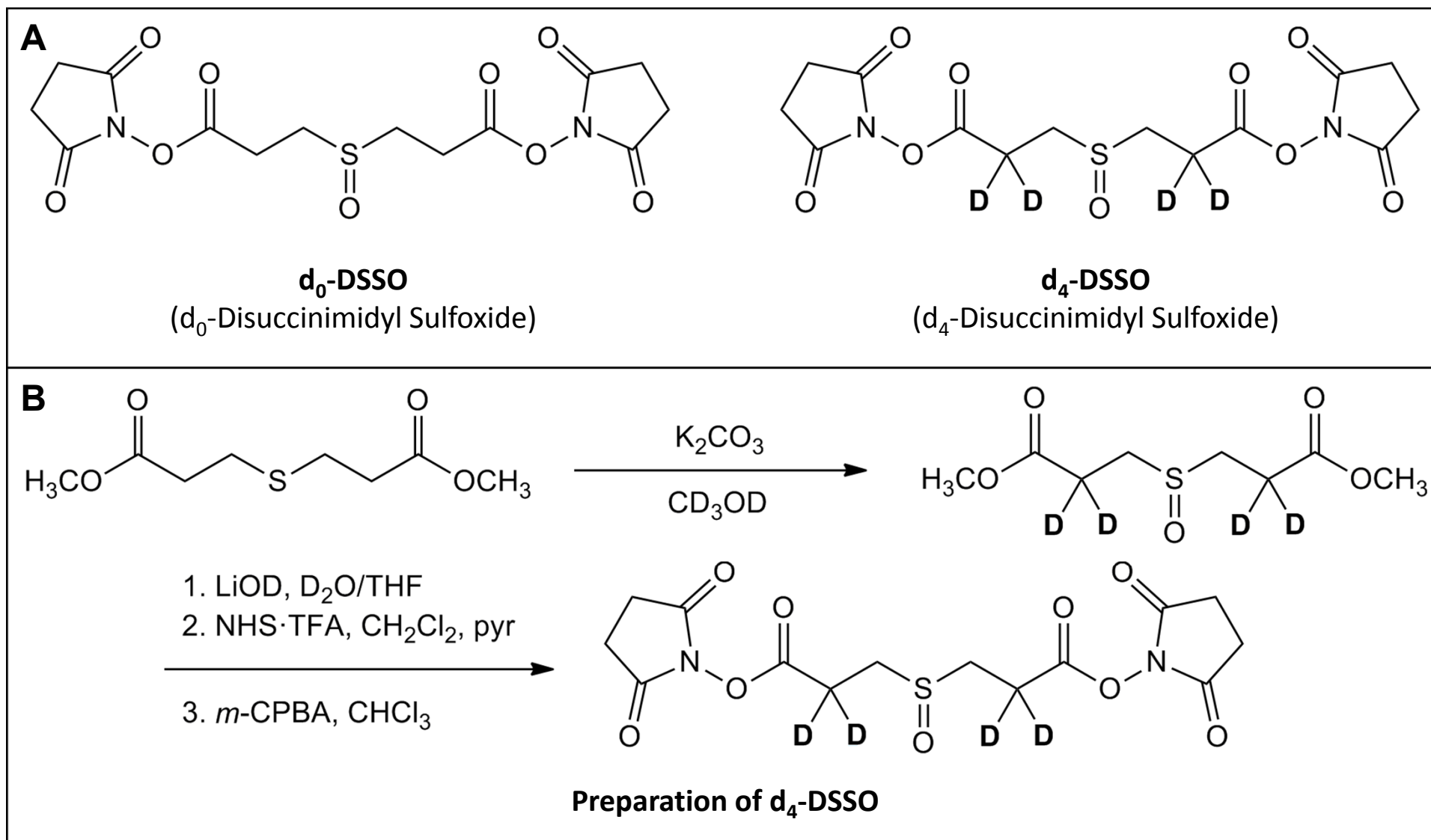
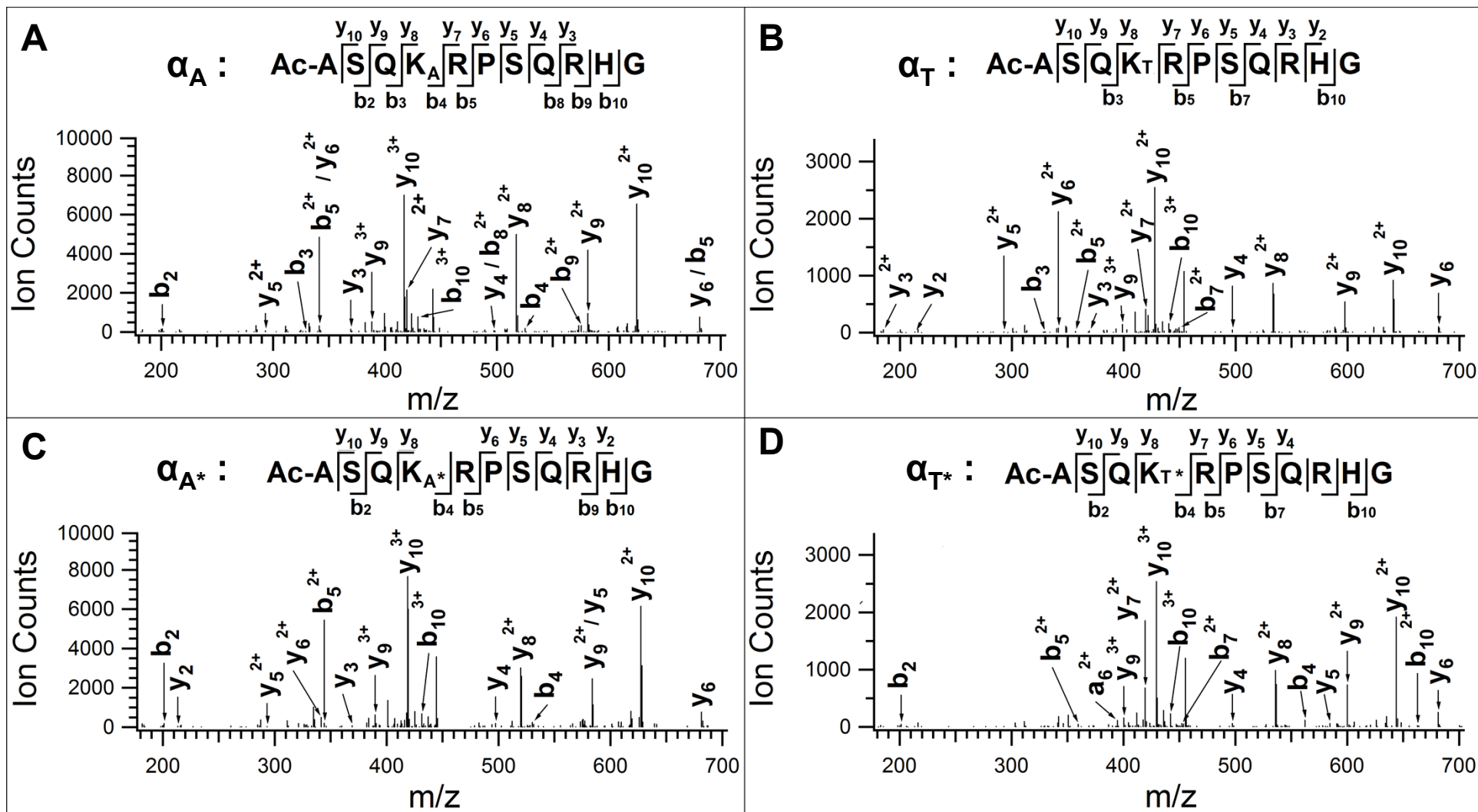


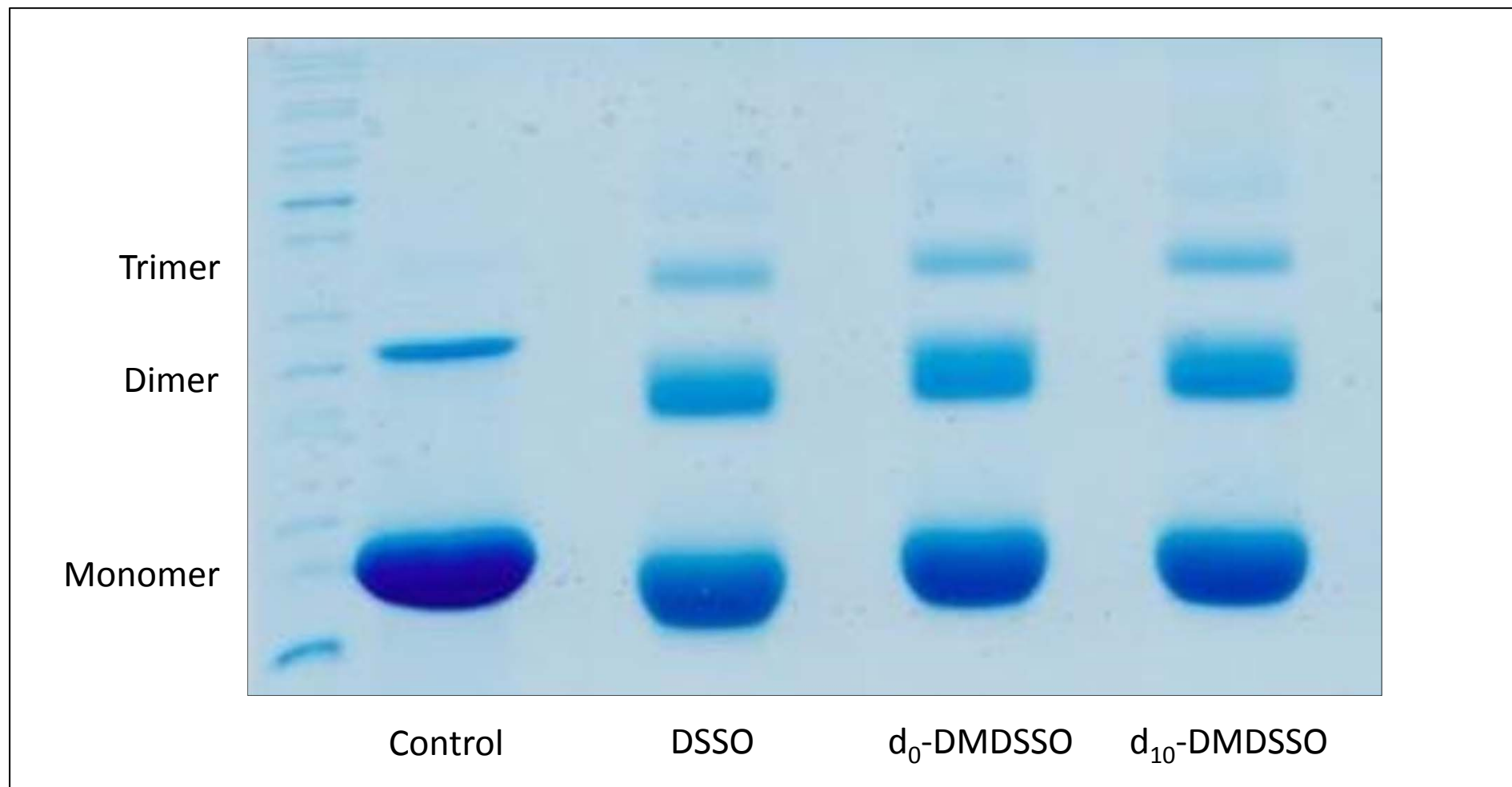
## Supplementary Figure 1.



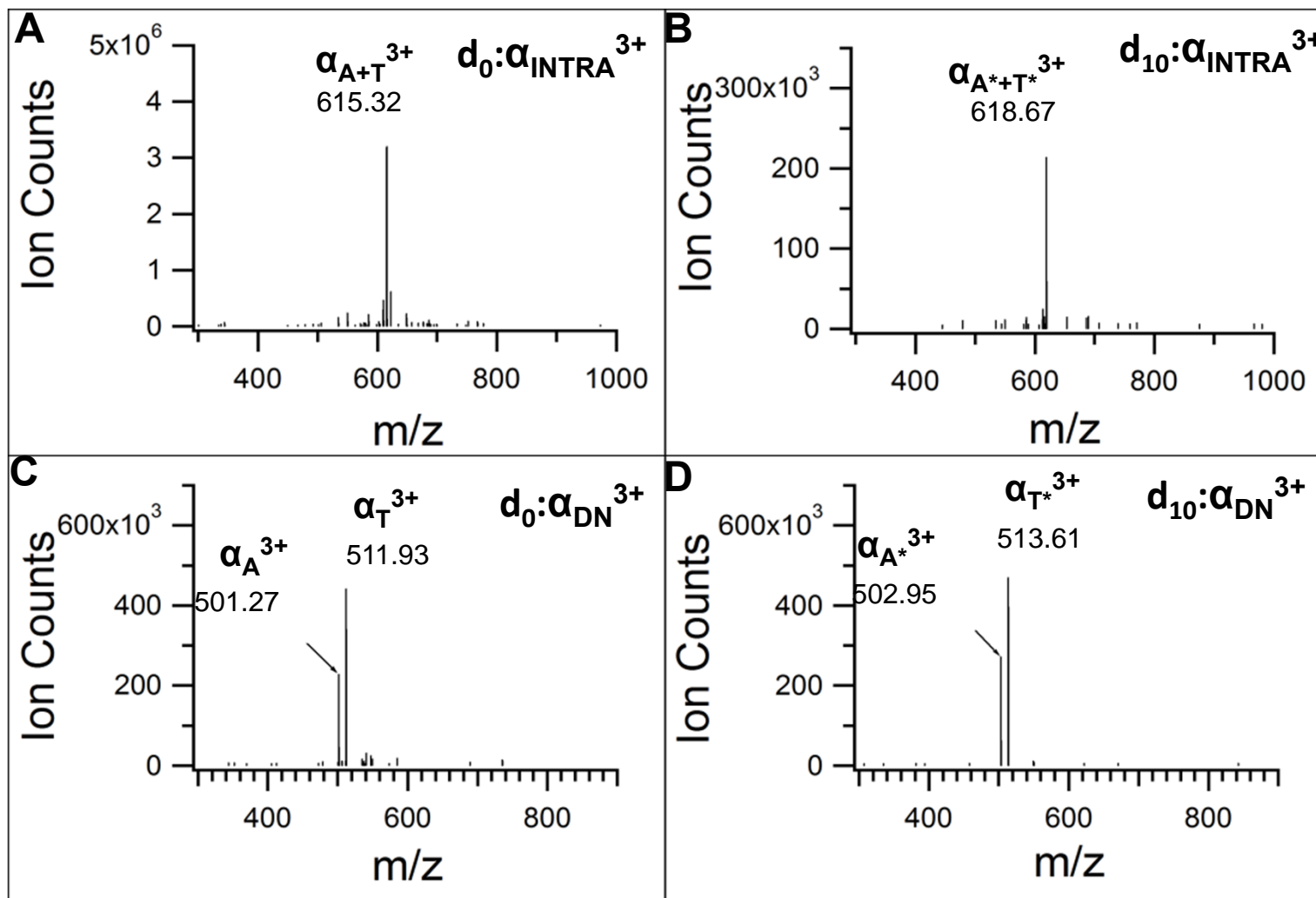
## Supplemental Figure 2.



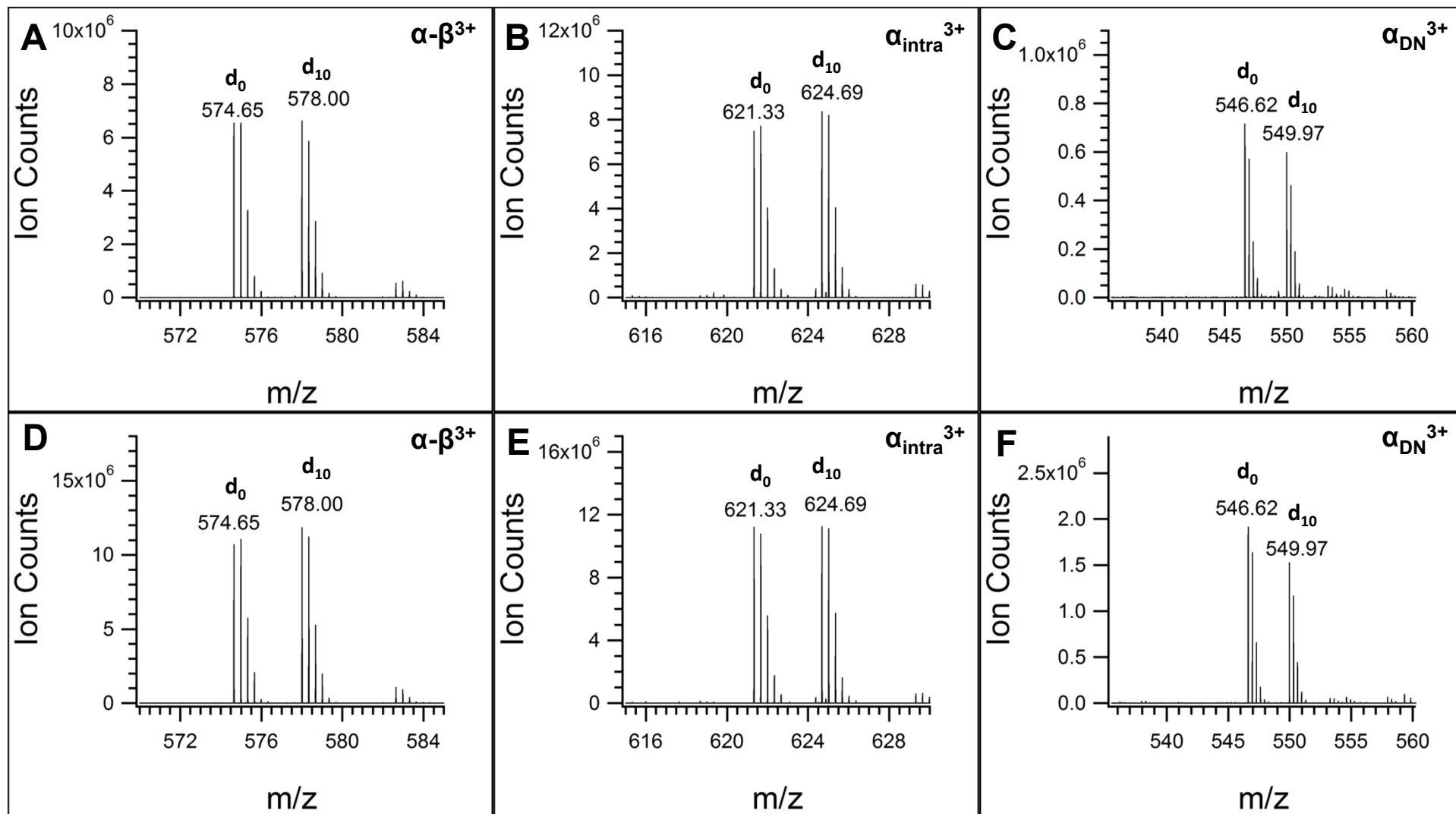
**Supplementary Figure 3.**



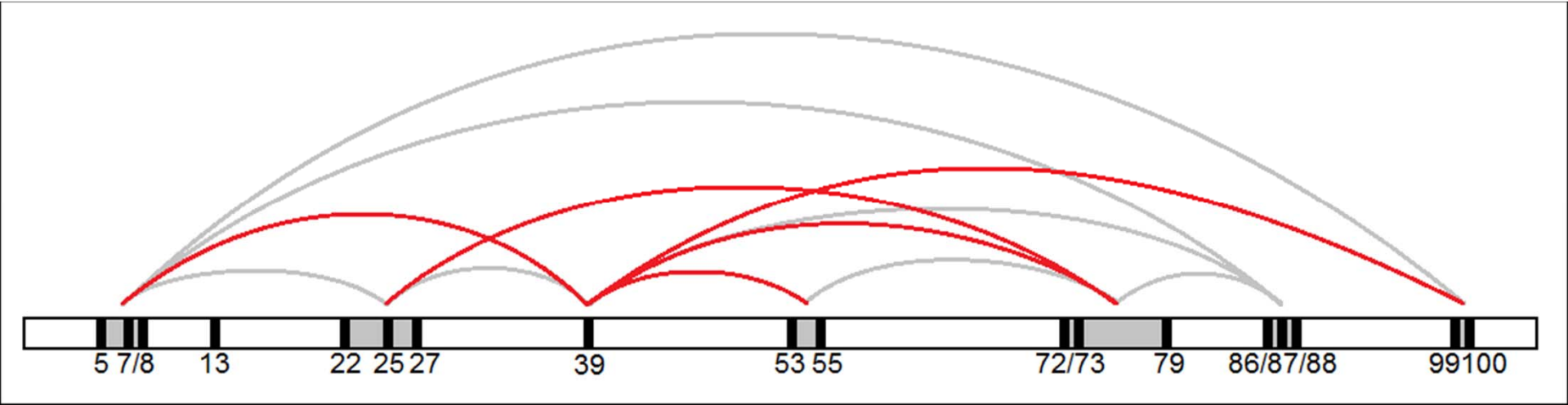
Supplementary Figure 4.



## Supplementary Figure 5.



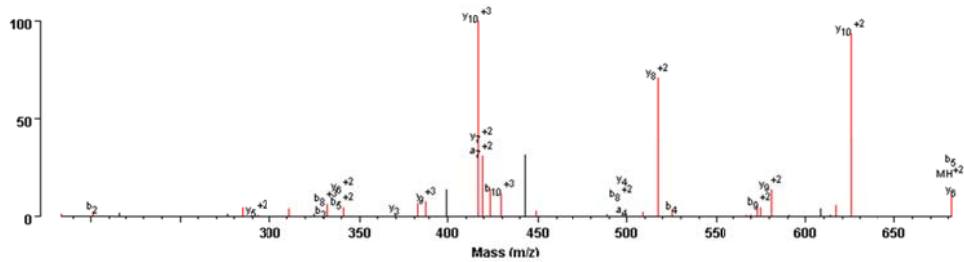
**Supplementary Figure 6.**



Supplemental Figure 7.

Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
Ac-ASQKRPSQRHG	6	462.9033	454.57	3	464.5796	456.25	3
Ac-ASQKRPSQRHG			465.23	3		466.91	3

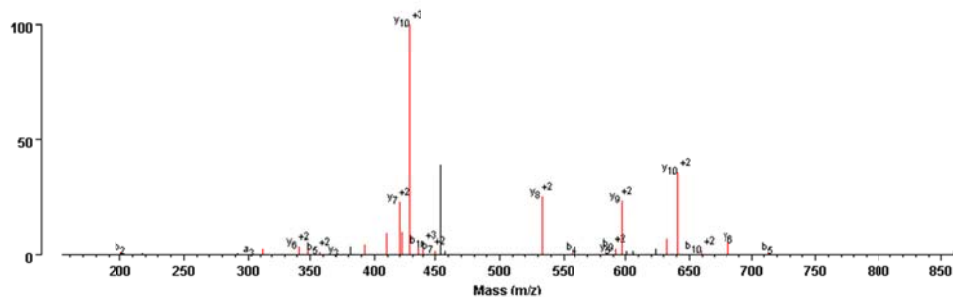
Acetyl-ASQK(XL:C-Alkene)RPSQRHG<sup>+3</sup>



m/z	z	Ion Type
183.158	1	b-H2O,2,+1
201.033	1	b,2,+1
284.6	1	y-NH3,5,+2
293.194	1	y,5,+2
311.247	1	b-H2O,3,+1
329.038	1	b,3,+1
332.222	1	b-H2O,5,+2
		y-H2O,6,+2
		b,8,+3
		y-NH3,6,+2
		b-NH3,5,+2
341.193	1	b,5,+2
		y,6,+2
369.299	1	y,3,+1
382.171	1	y-NH3,9,+3
		y-H2O,9,+3
388.151	1	y,9,+3
417.002	1	y,10,+3
419.512	1	a,7,+2
		y,7,+2
4.24E+02	1	b-NH3,10,+3
		b-H2O,10,+3
		b-H2O,7,+2
429.517	1	b,10,+3
448.696	1	MH-H2O,,+3

		MH-NH3,,+3
489.158	1	b-NH3,8,+2
497.351	1	a,4,+1
		b,8,+2
		y,4,+1
509.111	1	y-NH3,8,+2
517.444	1	y,8,+2
525.331	1	b,4,+1
567.255	1	y-NH3,5,+1
		b-NH3,9,+2
573.167	1	y-NH3,9,+2
575.271	1	b,9,+2
581.162	1	y,9,+2
616.551	1	y-NH3,10,+2
625.088	1	y,10,+2
681.321	1	y,6,+1
		MH,,+2
		b,5,+1

**Acetyl-ASQK(XL:C-Thiol(Unsaturated))RPSQRHG<sup>+3</sup>**

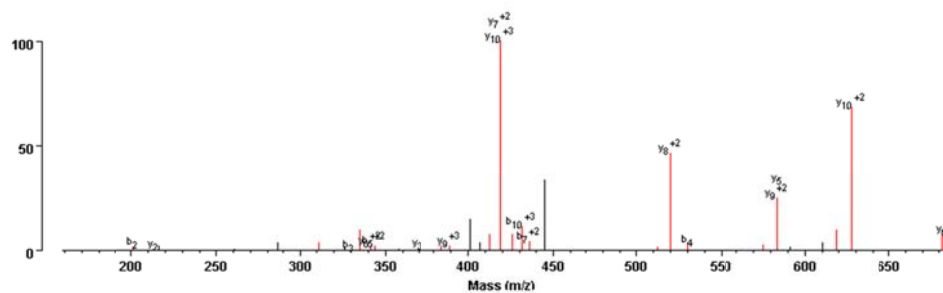


m/z	z	Ion Type
182.931	1	b-H2O,2,+1
200.733	1	b,2,+1
274.273	1	y-NH3,7,+3
		y-H2O,7,+3
301.011	1	a,3,+1
311.208	1	b-H2O,3,+1
341.504	1	y,6,+2
348.233	1	b-H2O,5,+2
		b-NH3,5,+2
357.298	1	b,5,+2
369.051	1	y,3,+1
392.589	1	y-H2O,9,+3
		y-NH3,9,+3



409.865	1	y-H2O,7,+2
419.392	1	y,7,+2
421.88	1	y-NH3,10,+3
		y-H2O,10,+3
427.767	1	y,10,+3
434.543	1	b-NH3,10,+3
		b-H2O,10,+3
440.043	1	b-H2O,7,+2
		b,10,+3
449.261	1	b,7,+2
533.253	1	y,8,+2
557.197	1	b,4,+1
584.534	1	y,5,+1
591.708	1	b,9,+2
597.472	1	y,9,+2
631.954	1	y-H2O,10,+2
		y-NH3,10,+2
640.69	1	y,10,+2
659.806	1	b,10,+2
681.332	1	y,6,+1
713.38	1	b,5,+1

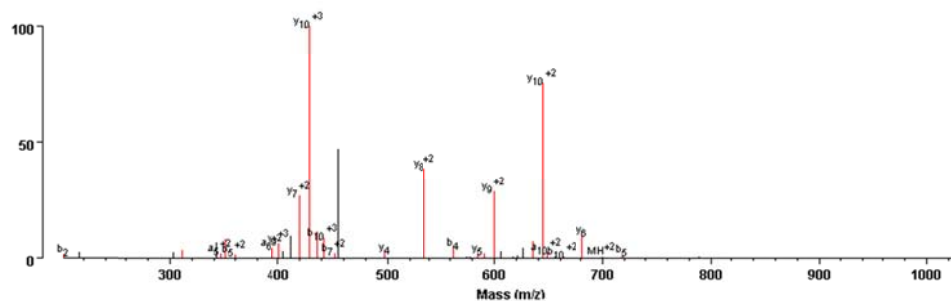
**Acetyl-ASQK(XL:D-Alkene)RPSQRHG<sup>+3</sup>**



m/z	z	Ion Type
201.013	1	b,2,+1
213.334	1	y,2,+1
284.74	1	b-H2O,7,+3
		b-NH3,7,+3
293.173	1	y,5,+2
311.014	1	b-H2O,3,+1
334.602	1	b-H2O,5,+2
		b-NH3,5,+2
341.513	1	y-NH3,8,+3
		y,6,+2

344.185	1	b,5,+2
369.144	1	y,3,+1
383.962	1	y-NH3,9,+3
		b-NH3,6,+2
		y-H2O,9,+3
389.608	1	y,9,+3
418.683	1	y,10,+3
		y,7,+2
425.184	1	b-H2O,10,+3
		b-NH3,10,+3
431.27	1	b,10,+3
436.951	1	y-NH3,11,+3
497.319	1	y,4,+1
512.038	1	b-H2O,4,+1
519.794	1	y,8,+2
530.268	1	b,4,+1
575.702	1	y-NH3,9,+2
583.843	1	y,9,+2
		y,5,+1
618.289	1	y-H2O,10,+2
		y-NH3,10,+2
627.27	1	y,10,+2
681.37	1	y,6,+1

**Acetyl-ASQK(XL:D-Thiol(Unsaturated))RPSQRHG<sup>+3</sup>**



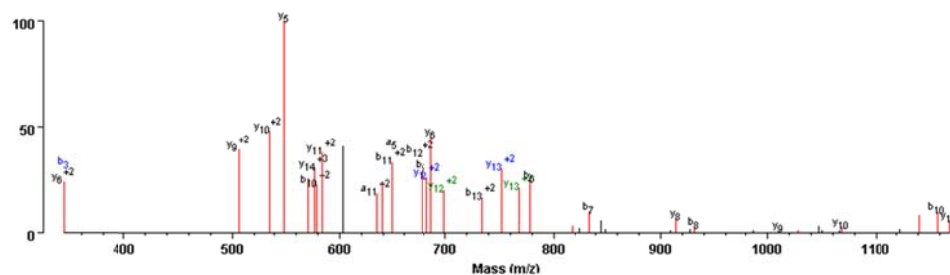
m/z	z	Ion Type
201.147	1	b,2,+1
311.295	1	b-H2O,3,+1
346.108	1	a,5,+2
350.73	1	b-H2O,5,+2
		b-NH3,5,+2
359.586	1	b,5,+2
394.513	1	y-NH3,9,+3
		a,6,+2

		y-H <sub>2</sub> O,9,+3
400.312	1	y,9,+3
419.351	1	y,7,+2
429.338	1	y,10,+3
435.929	1	b-H <sub>2</sub> O,10,+3
		b-NH <sub>3</sub> ,10,+3
442.059	1	b,10,+3
452.101	1	b,7,+2
497.365	1	y,4,+1
535.83	1	y,8,+2
5.62E+02	1	b,4,+1
584.592	1	b-H <sub>2</sub> O,9,+2
		y,5,+1
590.692	1	y-H <sub>2</sub> O,9,+2
600.084	1	y,9,+2
635.036	1	y-NH <sub>3</sub> ,10,+2
643.7	1	y,10,+2
648.27	1	a,10,+2
662.877	1	y-H <sub>2</sub> O,6,+1
		b,10,+2
681.212	1	y,6,+1
700.193	1	b-H <sub>2</sub> O,5,+1
		MH,,+2
718.404	1	b,5,+1

Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
GGKHKTGPNLHGLFGR	3	621.32	615.32	3	624.675	618.67	3

GGK(XL:C-Alkene)HK(XL:C-Thiol(Unsaturated))TGPLNHGLFGR<sup>+3</sup>

GGK(XL:C-Thiol(Unsaturated))HK(XL:C-Alkene)TGPLNHGLFGR<sup>+3</sup>

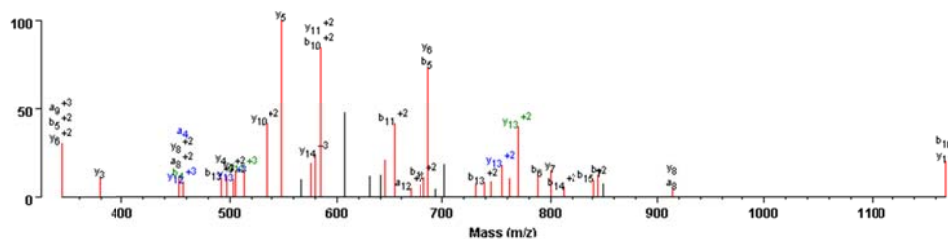


m/z	z	Peptide #	Ion Type
343.609	1	All	y,6,+2
		All	b-NH3,9,+3
		All	b-H2O,9,+3
		2	b,3,+1
505.951	1	1	y-H2O,13,+3
		All	y,9,+2
		1	y-NH3,13,+3
534.456	1	All	y,10,+2
549.237	1	All	y,5,+1
571.514	1	All	y-NH3,14,+3
		All	y-H2O,14,+3
		All	b-NH3,10,+2
577.422	1	All	y,14,+3
579.699	1	All	b,10,+2
584.633	1	All	y,11,+2
634.526	1	All	a,11,+2
639.554	1	All	b-H2O,11,+2
		All	b-NH3,11,+2
648.282	1	All	b,11,+2
		All	a,5,+1
676.393	1	All	b,5,+1
		All	b,12,+2
682.959	1	2	y,12,+2
686.232	1	All	y,6,+1

699.017	1	1	y,12,+2
733.594	1	All	b,13,+2
751.583	1	2	y,13,+2
767.456	1	1	y,13,+2
777.247	1	All	b,6,+1
816.307	1	All	b-H2O,7,+1
834.126	1	All	b,7,+1
913.319	1	All	b-H2O,8,+1
		All	MH-H2O,,+2
		All	y,8,+1
931.323	1	All	b,8,+1
1010.27	1	All	y,9,+1
1027.53	1	All	b-H2O,9,+1
1067.78	1	All	y,10,+1
1140.63	1	All	b-H2O,10,+1
1158.31	1	All	b,10,+1
1168.63	1	All	y,11,+1

**GGK(XL:D-Alkene)HK(XL:D-Thiol(Unsaturated))TGPLHGLFGR<sup>+3</sup>**

**GGK(XL:D-Thiol(Unsaturated))HK(XL:D-Alkene)TGPLHGLFGR<sup>+3</sup>**

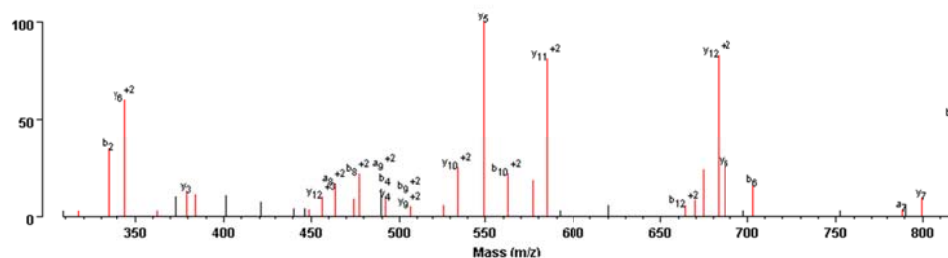


m/z	z	Peptide #	Ion Type
343.645	1	All	y,6,+2
		All	b,5,+2
		All	a,9,+3
379.229	1	All	y,3,+1
453.511	1	1	b,4,+1
457.415	1	All	a,8,+2
		All	y,8,+2
		2	y,12,+3
		2	a,4,+1
492.492	1	All	b,13,+3
		All	y,4,+1
497.135	1	All	y-NH3,9,+2
		2	y-NH3,13,+3

		2	y-H <sub>2</sub> O,13,+3
503.019	1	2	y,13,+3
505.61	1	All	y,9,+2
513.67	1	1	y,13,+3
534.53	1	All	y,10,+2
549.244	1	All	y,5,+1
576.634	1	All	b-NH <sub>3</sub> ,10,+2
		All	y-NH <sub>3</sub> ,11,+2
580.775	1	All	y,14,+3
585.002	1	All	b,10,+2
		All	y,11,+2
644.456	1	All	b-H <sub>2</sub> O,11,+2
		All	b-NH <sub>3</sub> ,11,+2
653.406	1	All	b,11,+2
668.087	1	All	a,12,+2
677.228	1	2	y-NH <sub>3</sub> ,12,+2
682.071	1	All	b,12,+2
686.479	1	All	b,5,+1
		All	y,6,+1
730.19	1	All	b-NH <sub>3</sub> ,13,+2
738.249	1	All	b,13,+2
744.791	1	2	y-H <sub>2</sub> O,13,+2
754.133	1	2	y,13,+2
761.861	1	1	y-NH <sub>3</sub> ,13,+2
769.853	1	1	y,13,+2
		All	b-H <sub>2</sub> O,6,+1
		All	b-NH <sub>3</sub> ,6,+1
787.397	1	All	b,6,+1
799.443	1	All	y,7,+1
812.03	1	All	b,14,+2
840.666	1	All	b,15,+2
844.47	1	All	b,7,+1
913.638	1	All	a,8,+1
		All	y,8,+1
1168.6	1	All	y,11,+1
		All	b,10,+1

Peptide Sequence	d0-dmDSSO			d10-dmDSSO			
	z	MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
KHKTGPNLHGLFGR	3	546.6116	501.27	3	549.9661	502.95	3
			511.93	3		513.61	3

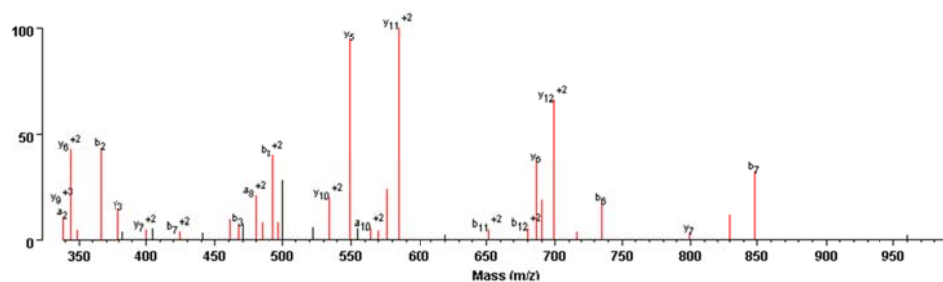
**HK(XL:C-Alkene)TGPLNHGLFGR<sup>+3</sup>**



m/z	z	Ion Type
317.183	1	b-NH3,2,+1
334.178	1	b,2,+1
343.815	1	y,6,+2
		b-NH3,6,+2
362.356	1	y-NH3,3,+1
379.286	1	y,3,+1
383.704	1	y-H2O,11,+3
449.239	1	y-H2O,12,+3
		y-NH3,8,+2
456.155	1	y,12,+3
463.628	1	a,8,+2
474.368	1	b-H2O,4,+1
477.109	1	b,8,+2
492.302	1	y,4,+1
		b,4,+1
		a,9,+2
506.021	1	y,9,+2
		b,9,+2
526.141	1	y-NH3,10,+2
534.51	1	y,10,+2
549.359	1	y,5,+1
562.434	1	b,10,+2
576.512	1	y-NH3,11,+2
584.886	1	y,11,+2

663.862	1	b,12,+2
669.182	1	y-NH3,6,+1
674.555	1	y-NH3,12,+2
683.104	1	y,12,+2
686.405	1	y,6,+1
		b-NH3,6,+1
703.333	1	b,6,+1
788.438	1	a,7,+1
799.248	1	b-NH3,7,+1
		y,7,+1
816.396	1	b,7,+1

**HK(XL:C-Thiol(Unsaturated))TGPLHGLFGR<sup>+3</sup>**

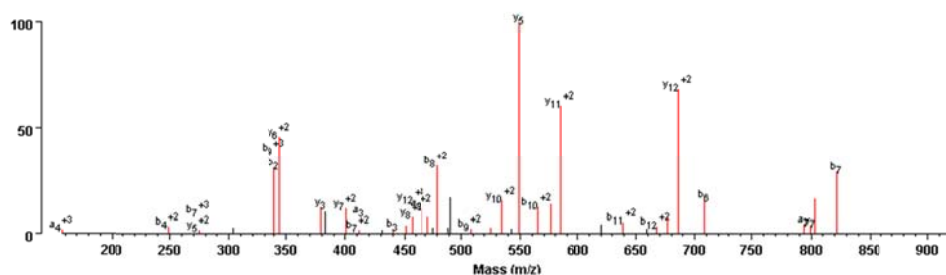


m/z	z	Ion Type
338.084	1	a,2,+1
		y,9,+3
343.846	1	y,6,+2
348.873	1	b-NH3,2,+1
366.078	1	b,2,+1
379.29	1	y,3,+1
		b-H2O,10,+3
400.177	1	y,7,+2
424.612	1	b,7,+2
460.451	1	y-NH3,12,+3
		y-H2O,12,+3
466.861	1	b,3,+1
479.382	1	a,8,+2
484.542	1	b-NH3,8,+2
		b-H2O,8,+2
493.398	1	b,8,+2
497.404	1	y-NH3,9,+2
534.352	1	y,10,+2
549.365	1	y,5,+1
564.171	1	a,10,+2



569.34	1	b-H <sub>2</sub> O,10,+2
		b-NH <sub>3</sub> ,10,+2
575.842	1	y-H <sub>2</sub> O,11,+2
		y-NH <sub>3</sub> ,11,+2
584.97	1	y,11,+2
652	1	b,11,+2
680.255	1	b,12,+2
686.293	1	y,6,+1
689.996	1	y-H <sub>2</sub> O,12,+2
		y-NH <sub>3</sub> ,12,+2
699.095	1	y,12,+2
716.975	1	b-H <sub>2</sub> O,6,+1
735.336	1	b,6,+1
799.453	1	y,7,+1
830.341	1	b-H <sub>2</sub> O,7,+1
848.229	1	b,7,+1

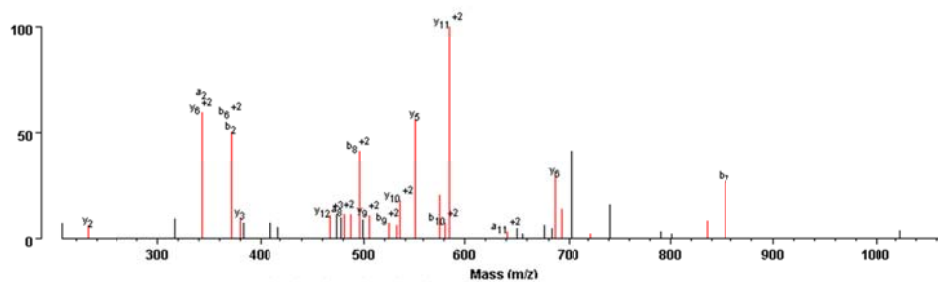
**HK(XL:D-Alkene)TGPLHGLFGR<sup>+3</sup>**



m/z	z	Ion Type
157.165	1	a,4,+3
249.431	1	b,4,+2
275.033	1	y,5,+2
		b,7,+3
339.212	1	b,2,+1
		b,9,+3
343.845	1	y,6,+2
379.194	1	y,3,+1
400.349	1	y,7,+2
411.688	1	b,7,+2
		a,3,+1
440.007	1	b,3,+1
451.34	1	y-H <sub>2</sub> O,12,+3
		y-NH <sub>3</sub> ,12,+3
457.124	1	y,8,+2

		y,12,+3
465.693	1	a,8,+2
471.695	1	b-NH3,8,+2
479.796	1	b,8,+2
		b-NH3,4,+1
		b-H2O,4,+1
508.742	1	b,9,+2
525.61	1	y-NH3,10,+2
534.384	1	y,10,+2
549.286	1	y,5,+1
564.925	1	b,10,+2
576.157	1	y-NH3,11,+2
		b-H2O,5,+1
		y-H2O,11,+2
584.731	1	y,11,+2
638.453	1	b,11,+2
667.331	1	b,12,+2
676.508	1	y-H2O,12,+2
		y-NH3,12,+2
685.712	1	y,12,+2
708.229	1	b,6,+1
793.695	1	a,7,+1
799.633	1	y,7,+1
803.335	1	b-H2O,7,+1
821.391	1	b,7,+1

**HK(XL:D-Thiol(Unsaturated))TGPLNHGLFGR<sup>+3</sup>**

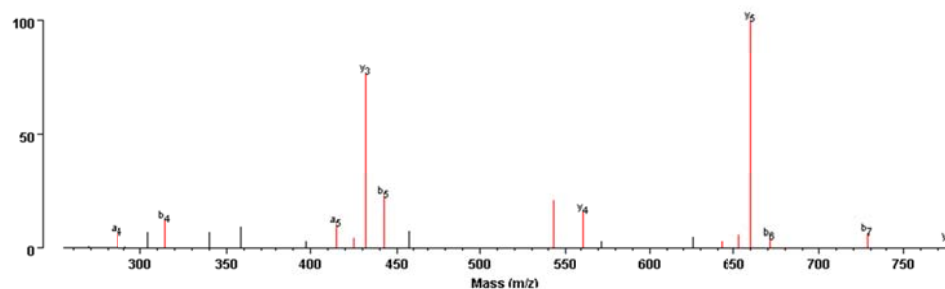


m/z	z	Ion Type
232.055	1	y,2,+1
343.56	1	y,6,+2
		b-H2O,9,+3
		a,2,+1
371.256	1	b,2,+1
		b,6,+2

379.419	1	y,3,+1
468.227	1	y,12,+3
481.752	1	a,8,+2
487.501	1	b-NH3,8,+2
495.987	1	b,8,+2
505.859	1	y,9,+2
524.305	1	b,9,+2
531.689	1	y-NH3,5,+1
534.703	1	y,10,+2
549.186	1	y,5,+1
575.77	1	y-H2O,11,+2
		y-NH3,11,+2
581.286	1	b,10,+2
584.92	1	y,11,+2
640.479	1	a,11,+2
686.527	1	y,6,+1
692.755	1	y-NH3,12,+2
		y-H2O,12,+2
722.353	1	b-H2O,6,+1
835.51	1	b-H2O,7,+1
853.275	1	b,7,+1

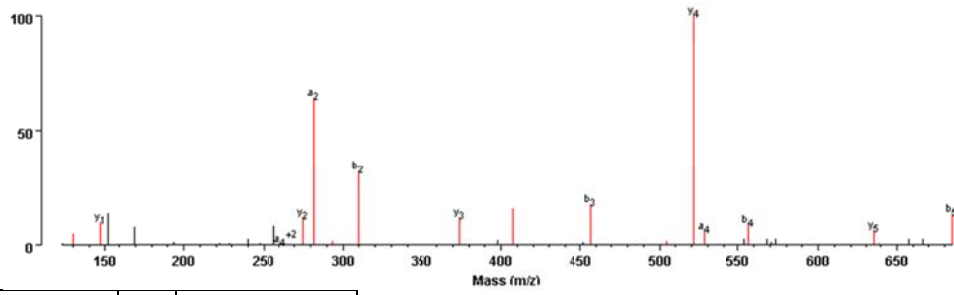
Peptide Sequence	z	d0-dmDSSO		d10-dmDSSO			
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
Ac-GDVEK GK KIFVQK	3	574.6436	874.400	1	577.9993	879.430	1
			415.761	2		418.277	2

**M(Met-loss+Acetyl)GDVEK(XL:C-Thiol(Unsaturated))GK**



m/z	z	Ion Type
285.954	1	a,4,+1
314.235	1	b,4,+1
415.123	1	a,5,+1
		y-NH3,3,+1
425.308	1	b-H2O,5,+1
432.311	1	y,3,+1
442.926	1	b,5,+1
543.166	1	y-H2O,4,+1
561.293	1	y,4,+1
642.202	1	y-H2O,5,+1
653.099	1	b-H2O,6,+1
660.178	1	y,5,+1
671.194	1	b,6,+1
728.104	1	b,7,+1
775.584	1	y,6,+1

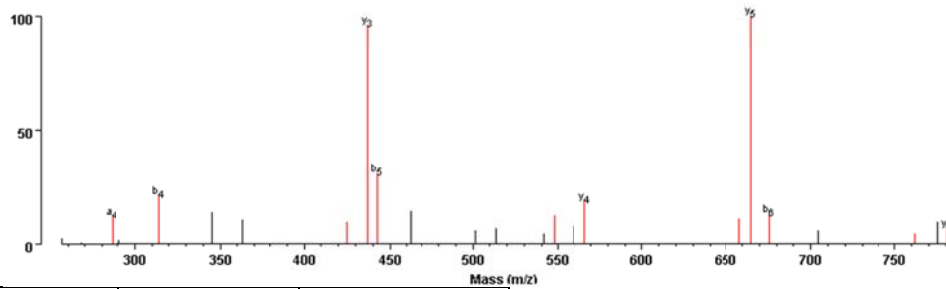
**K(XL:C-Alkene)IFVQK<sup>+2</sup>**



m/z	z	Ion Type
130.132	1	y-NH3,1,+1
		y-NH3,2,+2
147.217	1	y,1,+1
		b-NH3,2,+2
265.206	1	a,4,+2
275.223	1	y,2,+1
282.257	1	a,2,+1
293.466	1	b-NH3,2,+1
310.102	1	b,2,+1
374.241	1	y,3,+1
407.256	1	MH-NH3,,+2
457.132	1	b,3,+1
504.277	1	y-NH3,4,+1
521.321	1	y,4,+1
528.024	1	a,4,+1

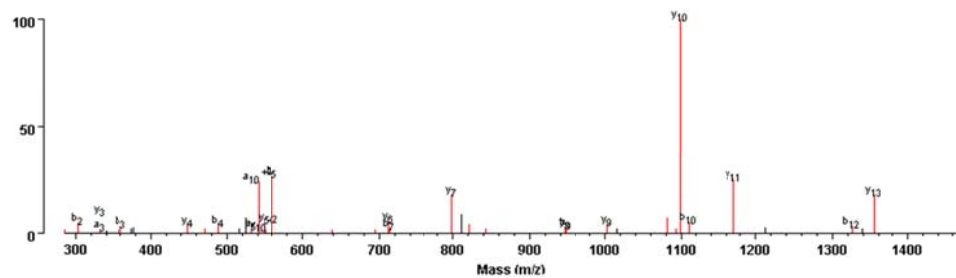
Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
Ac-GDVEK GK KTGQAPGFSYTDANK	3	848.7386	874.400	1	852.0922	879.429	1
			826.901	2		829.416	2

**M(Met-loss+Acetyl)GDVEK(XL:D-Thiol(Unsaturated))GK**



m/z	z	Ion Type
286	1	a,4,+1
313.803	1	b,4,+1
425.066	1	b-H2O,5,+1
437.285	1	y,3,+1
443	1	b,5,+1
548	1	y-H2O,4,+1
566.182	1	y,4,+1
658.288	1	b-H2O,6,+1
665.28	1	y,5,+1
676	1	b,6,+1
762	1	y-H2O,6,+1
780.626	1	y,6,+1

**K(XL:D-Alkene)TGQAPGFSYTDANK<sup>+2</sup>**

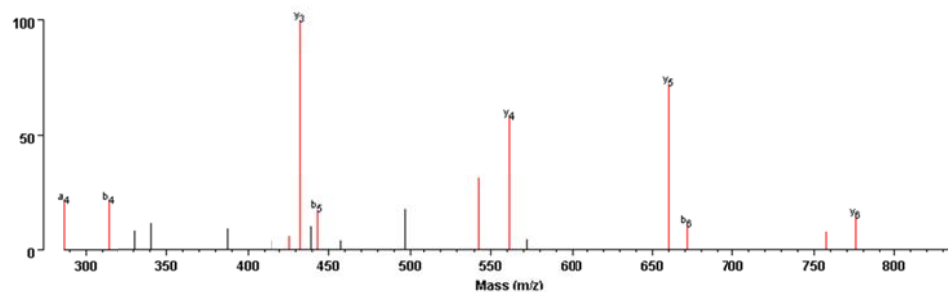


m/z	z	Ion Type
285.064	1	b-H <sub>2</sub> O,2,+1
303.176	1	b,2,+1
332.235	1	a,3,+1
		y,3,+1
360.221	1	b,3,+1
447.191	1	y,4,+1
470.325	1	b-H <sub>2</sub> O,4,+1
488.202	1	b,4,+1
531.407	1	a,5,+1
		y-NH <sub>3</sub> ,5,+1
541.425	1	b-H <sub>2</sub> O,5,+1
		y-H <sub>2</sub> O,10,+2
		y-NH <sub>3</sub> ,10,+2
		a,10,+2
548.206	1	y,5,+1
550.349	1	y,10,+2
559.111	1	b,5,+1
638.227	1	b-H <sub>2</sub> O,6,+1
694.964	1	b-H <sub>2</sub> O,7,+1
711.248	1	y,6,+1
713.467	1	b,7,+1
798.186	1	y,7,+1
820.278	1	MH-H <sub>2</sub> O,,+2
842.332	1	b-H <sub>2</sub> O,8,+1
945.175	1	y,8,+1
947.328	1	b,9,+1
1002.5	1	y,9,+1
1081.48	1	y-H <sub>2</sub> O,10,+1
1093.63	1	b-NH <sub>3</sub> ,10,+1
1099.28	1	y,10,+1

1110.42	1	b,10,+1
1170.4	1	y,11,+1
1326.51	1	b,12,+1
1355.18	1	y,13,+1

Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
Ac-GDVEK GK KKGER	3	526.2721	874.398	1	529.6268	879.429	1
			343.204	2		345.720	2

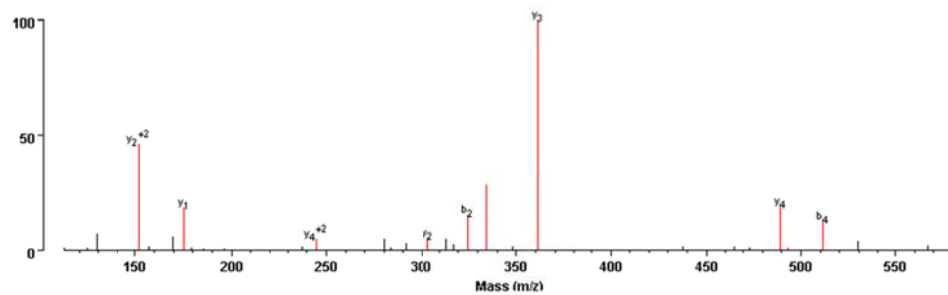
**M(Met-loss+Acetyl)GDVEK(XL:C-Thiol(Unsaturated))GK**



m/z	z	Ion Type
286.08	1	a,4,+1
314.054	1	b,4,+1
425.443	1	b-H <sub>2</sub> O,5,+1
432.188	1	y,3,+1
443.169	1	b,5,+1
543.2	1	y-H <sub>2</sub> O,4,+1
561.48	1	y,4,+1
660.249	1	y,5,+1
671.484	1	b,6,+1
757.691	1	y-H <sub>2</sub> O,6,+1
775.381	1	y,6,+1



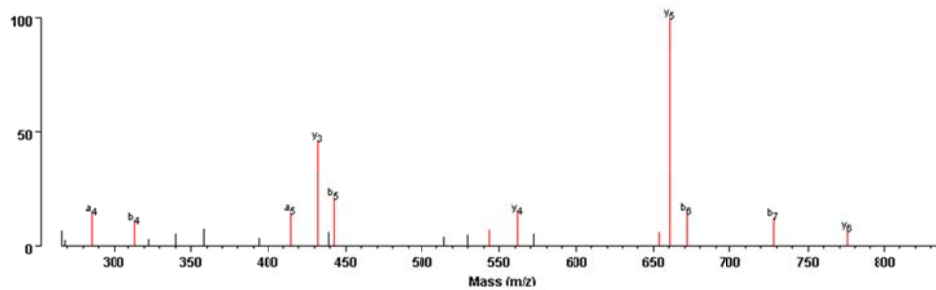
**K(XL:C-Alkene)KGER<sup>+2</sup>**



m/z	z	Ion Type
152.172	1	y <sub>2</sub> ,+2
175.112	1	y <sub>1</sub> ,+1
245.14	1	y <sub>4</sub> ,+2
304.131	1	y <sub>2</sub> ,+1
325.125	1	b <sub>2</sub> ,+1
334.426	1	MH-H <sub>2</sub> O,,+2
		MH-NH <sub>3</sub> ,,+2
361.283	1	y <sub>3</sub> ,+1
489.272	1	y <sub>4</sub> ,+1
493.482	1	b-H <sub>2</sub> O,4,+1
511.371	1	b <sub>4</sub> ,+1

Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
Ac-GDVEK GK	4	631.335	874.399	1	633.8503	879.427	1
KKGEREDLIAYLK			544.311	3		545.988	3

**M(Met-loss+Acetyl)GDVEK(XL:C-Thiol(Unsaturated))GK**

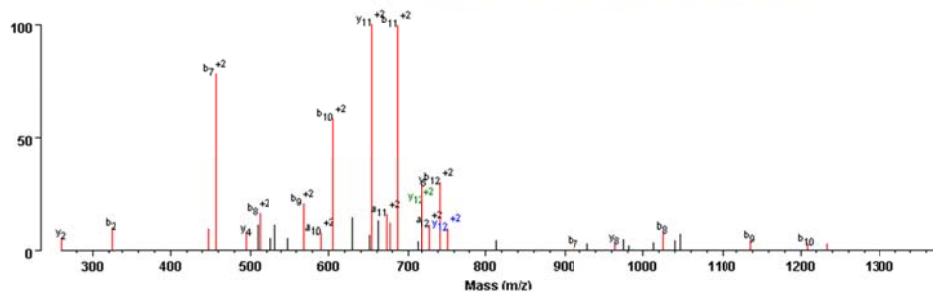


m/z	z	Ion Type
285.922	1	a,4,+1
314.057	1	b,4,+1
415.128	1	a,5,+1
		y-NH3,3,+1
432.287	1	y,3,+1
442.903	1	b,5,+1
543.224	1	y-H2O,4,+1
561.46	1	y,4,+1
653.3	1	b-H2O,6,+1
660.373	1	y,5,+1
671.182	1	b,6,+1
728.346	1	b,7,+1

775.08	1	y,6,+1
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**K(XL:C-Alkene)KGEREDLIAYLK<sup>+3</sup>**

**KK(XL:C-Alkene)GEREDLIAYLK<sup>+3</sup>**



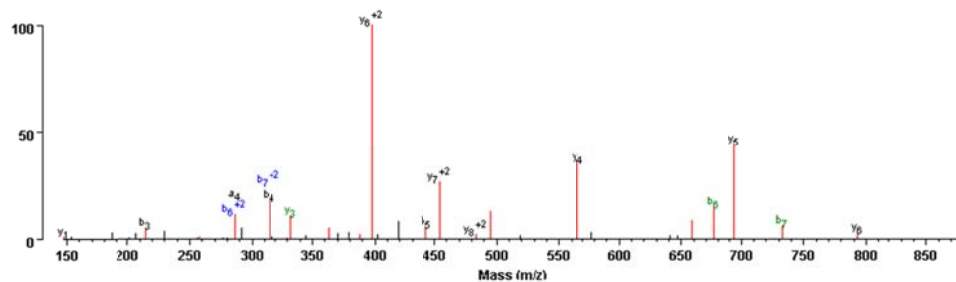
m/z	z	Peptide #	Ion Type
260.533	1	All	b-NH3,6,+3
		All	y,2,+1
		All	b-H2O,6,+3
325.12	1	All	b-H2O,5,+2
		All	b,2,+1
		All	b-NH3,5,+2
447.665	1	All	b-NH3,7,+2
		All	b-H2O,7,+2
456.43	1	All	b,7,+2
494.379	1	All	y,4,+1
		All	b-NH3,4,+1
512.724	1	All	b,8,+2
569.455	1	All	b,9,+2
590.712	1	All	a,10,+2
		All	y-NH3,5,+1
604.908	1	All	b,10,+2
654.046	1	All	y,11,+2
672.168	1	All	a,11,+2
677.465	1	All	b-H2O,11,+2
		All	b-NH3,11,+2
686.532	1	All	b,11,+2
718.016	1	1	y,12,+2
720.424	1	All	y,6,+1
728.991	1	All	a,12,+2
743.057	1	All	b,12,+2
		2	y-H2O,12,+2
		2	y-NH3,12,+2
752.049	1	2	y,12,+2
911.558	1	All	b,7,+1

964.474	1	All	y,8,+1
1024.53	1	All	b,8,+1
1137.58	1	All	b,9,+1
1208.95	1	All	b,10,+1
1232.85	1	All	y-NH3,10,+1

Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
Ac-GDVEKGGK KKGGER	4	426.9798	501.750	2	429.4966	504.266	2
			343.203	2		361.706	2

**M(Met-loss+Acetyl)GDVEK(XL:D-Thiol(Unsaturated))GKK<sup>+2</sup>**

**M(Met-loss+Acetyl)GDVEKGGK(XL:D-Thiol(Unsaturated))K<sup>+2</sup>**

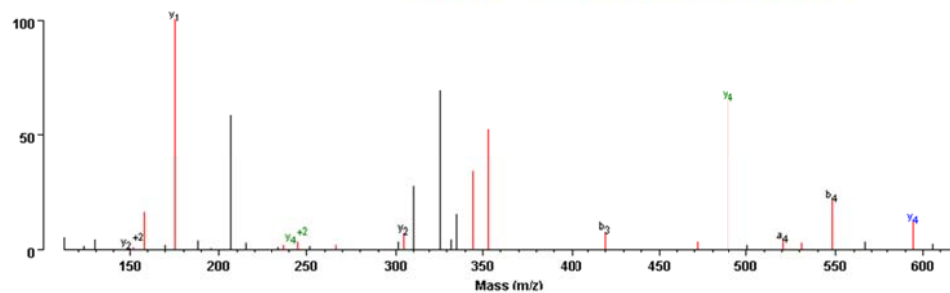


m/z	z	Peptide #	Ion Type
146.946	1	All	y,1,+1
214.981	1	All	b,3,+1
258.358	1	1	y-NH3,2,+1
286.144	1	All	a,4,+1
		2	b,6,+2
314.202	1	All	b,4,+1
		2	b,7,+2
329.953	1	1	b-NH3,6,+2
		1	b-H2O,6,+2
332.123	1	1	y,3,+1

362.84	1	2	y-NH3,2,+1
388.134	1	All	y-H2O,6,+2
		All	y-NH3,6,+2
397.417	1	All	y,6,+2
443.168	1	All	b,5,+1
454.706	1	All	y,7,+2
483.051	1	All	y,8,+2
495.406	1	All	MH-H2O,,+2
		All	MH-NH3,,+2
565.361	1	All	y,4,+1
658.528	1	1	b-H2O,6,+1
676.246	1	1	b,6,+1
		All	y-H2O,5,+1
694.325	1	All	y,5,+1
733.039	1	1	b,7,+1
793.27	1	All	y,6,+1

**K(XL:D-Thiol(Unsaturated))KGER<sup>+2</sup>**

**KK(XL:D-Thiol(Unsaturated))GER<sup>+2</sup>**



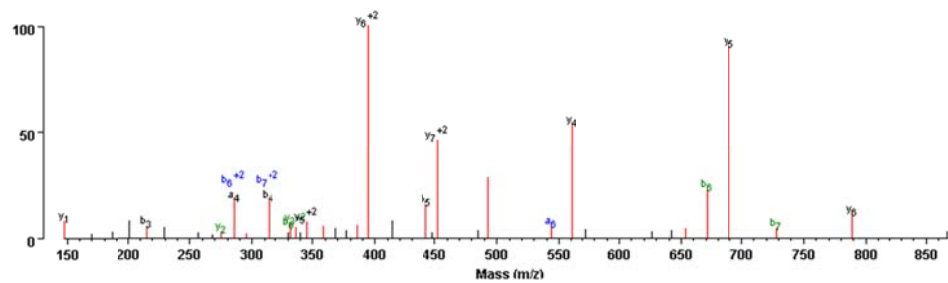
m/z	z	Peptide #	Ion Type
152.027	1	All	y,2,+2
158.144	1	All	y-NH3,1,+1
175.18	1	All	y,1,+1
236.813	1	1	y-NH3,4,+2
245.018	1	1	y,4,+2
266.184	1	All	b-NH3,4,+2
		All	b-H2O,4,+2
304.193	1	All	y,2,+1
344.51	1	All	y-NH3,3,+1
353.03	1	All	MH-NH3,,+2
		All	MH-H2O,,+2
419.435	1	All	b,3,+1
471.519	1	1	y-H2O,4,+1
489.289	1	1	y,4,+1

520.648	1	All	a,4,+1
531.237	1	All	b-NH3,4,+1
548.149	1	All	b,4,+1
594.262	1	2	y,4,+1

Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
Ac-GDVEKGKK KKGREDLIAYLK	5,4	530.8882	501.751	2	532.9012	504.265	2
			544.311	3		556.644	3

**M(Met-loss+Acetyl)GDVEK(XL:C-Thiol(Unsaturated))GKK<sup>+2</sup>**

**M(Met-loss+Acetyl)GDVEKGK(XL:C-Thiol(Unsaturated))K<sup>+2</sup>**

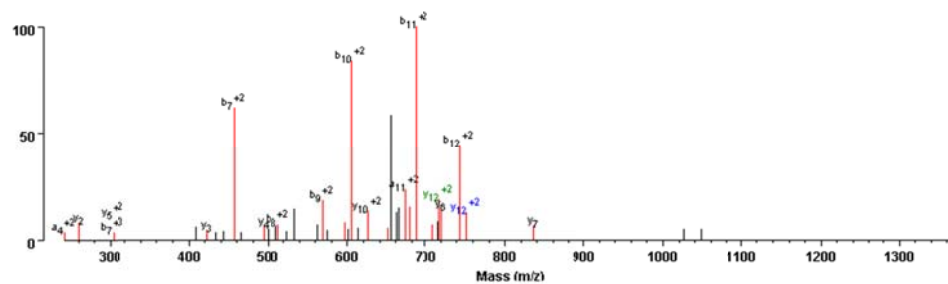


m/z	z	Peptide #	Ion Type
147.2590	1	All	y,1,+1
215.0590	1	All	b,3,+1
275.1090	1	1	y,2,+1
286.0010	1	All	a,4,+1
		2	b,6,+2
295.5650	1	All	b-H2O,4,+1
314.1110	1	All	b,4,+1
		2	b,7,+2
332.2720	1	1	y,3,+1
336.3140	1	All	y-H2O,5,+2

		1	b,6,+2
		All	y-NH3,5,+2
345.1520	1	All	y,5,+2
358.0480	1	2	y-NH3,2,+1
385.9520	1	All	y-H2O,6,+2
		All	y-NH3,6,+2
394.6280	1	All	y,6,+2
443.1350	1	All	b,5,+1
		All	y-H2O,7,+2
		All	y-NH3,7,+2
452.2810	1	All	y,7,+2
493.0260	1	All	MH-NH3,,+2
		All	MH-H2O,,+2
543.4100	1	All	y-NH3,4,+1
		2	a,6,+1
560.2230	1	All	y,4,+1
653.3310	1	1	b-H2O,6,+1
671.2200	1	1	b,6,+1
		All	y-H2O,5,+1
689.2500	1	All	y,5,+1
728.1170	1	1	b,7,+1
788.4530	1	All	y,6,+1

**K(XL:C-Alkene)KGEREDLIAYLK<sup>+3</sup>**

**KK(XL:C-Alkene)GEREDLIAYLK<sup>+3</sup>**



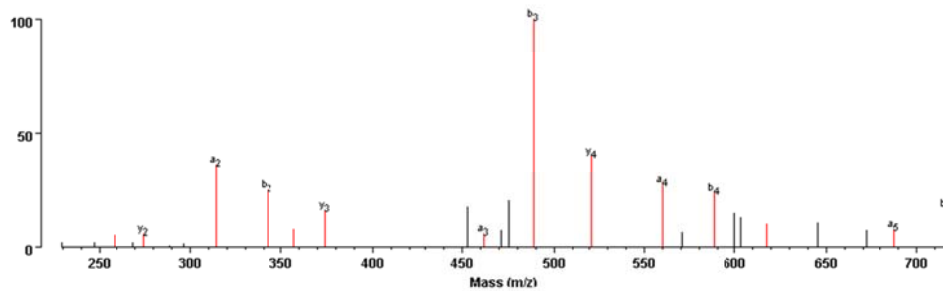
m/z	z	Peptide #	Ion Type
242.1460	1	All	a,4,+2
260.1600	1	All	b-H2O,6,+3
		All	y,2,+1
		All	b-NH3,6,+3
304.6860	1	All	b,7,+3
		All	y,5,+2
423.2150	1	All	y,3,+1

456.4350	1	All	b,7,+2
494.5400	1	All	y,4,+1
		All	b-NH3,4,+1
513.1400	1	All	b,8,+2
569.8390	1	All	b,9,+2
596.1490	1	All	b-NH3,10,+2
		All	b-H2O,10,+2
604.9100	1	All	b,10,+2
625.2960	1	All	y,10,+2
650.8530	1	All	b-NH3,5,+1
672.6320	1	All	a,11,+2
677.6150	1	All	b-NH3,11,+2
		All	b-H2O,11,+2
686.5760	1	All	b,11,+2
708.9460	1	1	y-H2O,12,+2
		1	y-NH3,12,+2
717.9670	1	1	y,12,+2
720.2230	1	All	y,6,+1
743.0950	1	All	b,12,+2
		2	y-H2O,12,+2
		2	y-NH3,12,+2
752.4090	1	2	y,12,+2
835.3970	1	All	y,7,+1
1376.7800	1	All	b,11,+1



Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
KIFVQK	3	844.7656	862.487	1	848.12		
KTGQAPGFSYTDANK			826.901	2			

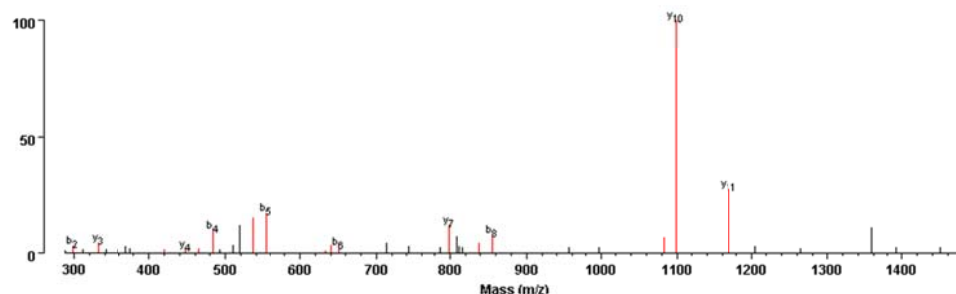
**K(XL:C-Thiol(Unsaturated))IFVQK**



m/z	z	Ion Type
258.1960	1	y-NH3,2,+1
274.9450	1	y,2,+1
314.2480	1	a,2,+1
342.2310	1	b,2,+1
357.1850	1	y-NH3,3,+1
374.2930	1	y,3,+1
461.7520	1	a,3,+1
489.1570	1	b,3,+1
521.1310	1	y,4,+1
560.2440	1	a,4,+1
588.0060	1	b,4,+1
617.4890	1	y-NH3,5,+1

687.9550	1	a,5,+1
716.2110	1	b,5,+1

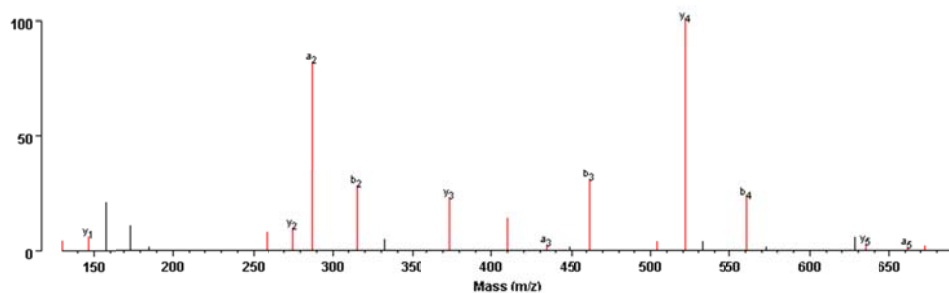
**K(XL:C-Alkene)TGQAPGFSYTDANK<sup>+2</sup>**



m/z	z	Ion Type
297.7810	1	b,2,+1
332.1290	1	y,3,+1
420.2150	1	b-NH3,8,+2
447.5140	1	y,4,+1
465.2880	1	b-H2O,4,+1
		y-NH3,8,+2
483.2390	1	b,4,+1
536.3560	1	b-H2O,5,+1
554.1760	1	b,5,+1
633.1890	1	b-H2O,6,+1
641.2940	1	y-NH3,12,+2
		y-H2O,12,+2
651.2650	1	b,6,+1
798.4140	1	y,7,+1
838.4890	1	b-NH3,8,+1
855.6830	1	b,8,+1
1082.6000	1	y-NH3,10,+1
1099.3700	1	y,10,+1
1170.5200	1	y,11,+1

Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
KIFVQK	4	391.978	415.761	2	394.4941	418.276	2
KKGER			359.190	2		361.705	2

**K(XL:D-Alkene)IFVQK<sup>+2</sup>**

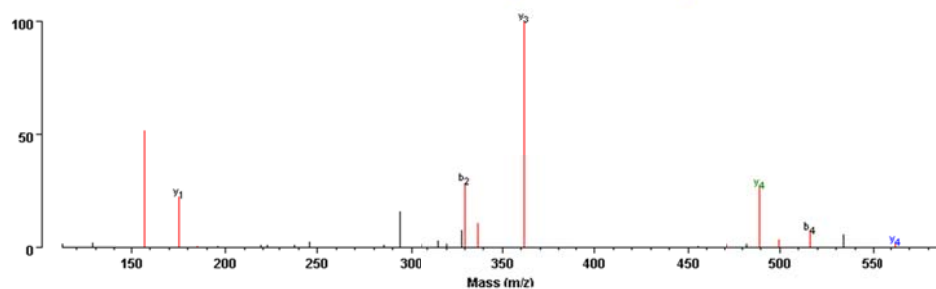


m/z	z	Ion Type
130.1580	1	y-NH3,1,+1
		y-NH3,2,+2
146.8980	1	y,1,+1
258.0660	1	y-NH3,2,+1
275.0040	1	y,2,+1
287.2700	1	a,2,+1
315.2240	1	b,2,+1
374.3680	1	y,3,+1
409.8490	1	MH-NH3,,+2
434.6110	1	a,3,+1
462.2150	1	b,3,+1
504.1420	1	y-NH3,4,+1

521.3270	1	y,4,+1
560.9200	1	b,4,+1
634.5070	1	y,5,+1
661.5020	1	a,5,+1
672.6900	1	b-NH3,5,+1

K(XL:D-Alkene)KGER<sup>+2</sup>

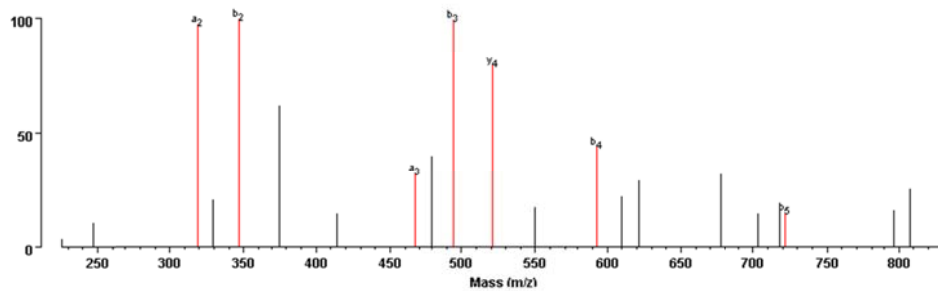
KK(XL:D-Alkene)GER<sup>+2</sup>



m/z	z	Peptide #	Ion Type
157.2090	1	All	b-NH3,2,+2
175.1340	1	All	y,1,+1
185.1730	1	All	b-NH3,3,+2
330.2630	1	All	b,2,+1
337.0200	1	All	MH-NH3,,+2
		All	MH-H2O,,+2
361.1900	1	All	y,3,+1
471.3990	1	1	y-H2O,4,+1
489.1300	1	1	y,4,+1
499.5470	1	All	b-NH3,4,+1
516.1390	1	All	b,4,+1
562.4720	1	2	y,4,+1

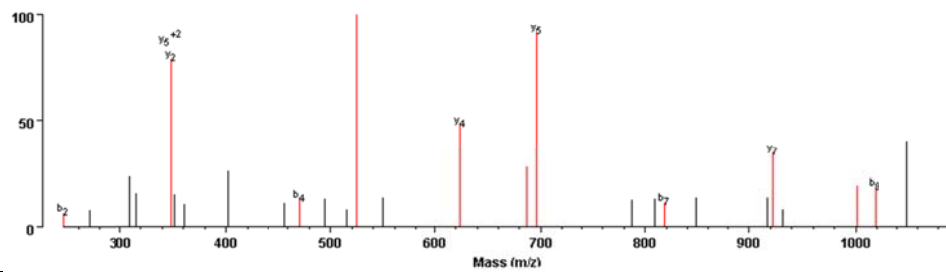
Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
KIFVQK EDLIAYLKK	3	680.72			684.0757	867.513 583.346	1 2

**K(XL:D-Thiol(Unsaturated))IFVQK**



m/z	z	Ion Type
319.0800	1	a,2,+1
347.0030	1	b,2,+1
466.5910	1	a,3,+1
494.3930	1	b,3,+1
521.4120	1	y,4,+1
593.1750	1	b,4,+1
721.4790	1	b,5,+1

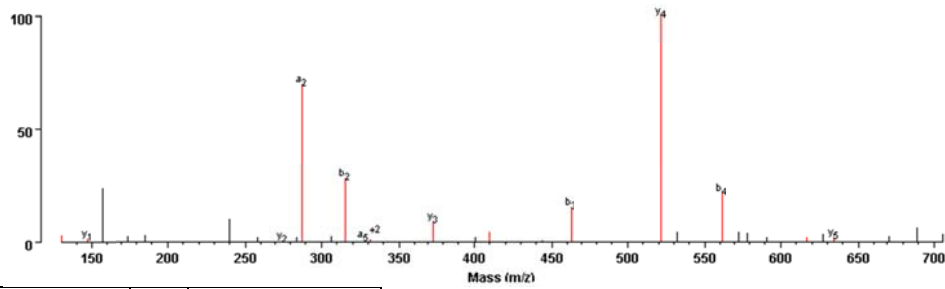
**EDLIAYLK(XL:D-Alkene)K<sup>+2</sup>**



m/z	z	Ion Type
245.0980	1	b <sub>2</sub> ,+1
348.3530	1	y <sub>2</sub> ,+1
		y <sub>5</sub> ,+2
471.1990	1	b <sub>4</sub> ,+1
524.1530	1	b-H <sub>2</sub> O, <sub>5</sub> ,+1
624.4670	1	y <sub>4</sub> ,+1
687.1330	1	b-H <sub>2</sub> O, <sub>6</sub> ,+1
695.5660	1	y <sub>5</sub> ,+1
818.1880	1	b <sub>7</sub> ,+1
921.8060	1	y <sub>7</sub> ,+1
1001.5000	1	b-H <sub>2</sub> O, <sub>8</sub> ,+1
1019.1200	1	b <sub>8</sub> ,+1
		y-H <sub>2</sub> O, <sub>8</sub> ,+1
		y-NH <sub>3</sub> , <sub>8</sub> ,+1

Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
KIFVQK	4	596.3345	415.761	2	598.8497	418.277	2
GEREDLIAYLKK			767.902	2		770.417	2

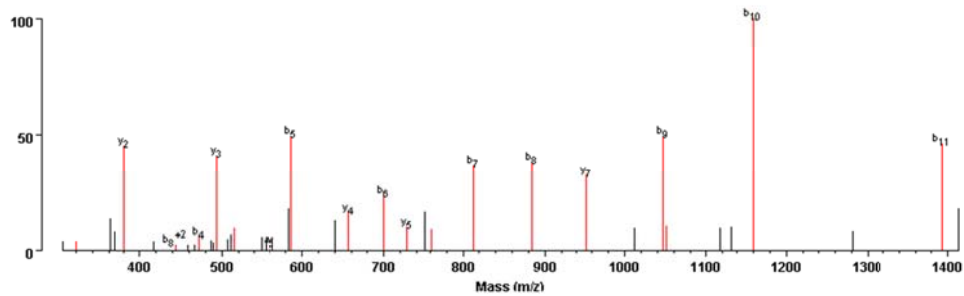
**K(XL:D-Alkene)IFVQK<sup>+2</sup>**



m/z	z	Ion Type
320.529	1	y-NH3,4,+2
380.185	1	y,2,+1
443.316	1	b,8,+2
472.52	1	b,4,+1
493.372	1	y,3,+1
515.531	1	b-NH3,9,+2
		b-H2O,9,+2
559.556	1	a,5,+1
587.272	1	b,5,+1

656.33	1	y,4,+1
700.36	1	b,6,+1
727.434	1	y,5,+1
762.135	1	MH-NH3,,+2
813.179	1	b,7,+1
884.506	1	b,8,+1
953.405	1	y,7,+1
1047.29	1	b,9,+1
1050.56	1	y-H2O,8,+1
1160.47	1	b,10,+1
1393.61	1	b,11,+1

**GEREDLIAYLK(XL:D-Thiol(Unsaturated))K<sup>+2</sup>**

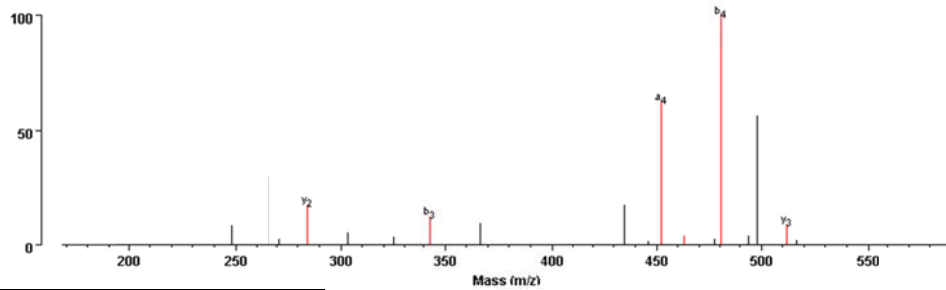


m/z	z	Ion Type
320.529	1	y-NH3,4,+2
380.185	1	y,2,+1
443.316	1	b,8,+2
472.52	1	b,4,+1
493.372	1	y,3,+1
515.531	1	b-NH3,9,+2
		b-H2O,9,+2
559.556	1	a,5,+1
587.272	1	b,5,+1
656.33	1	y,4,+1
700.36	1	b,6,+1
727.434	1	y,5,+1
762.135	1	MH-NH3,,+2
813.179	1	b,7,+1
884.506	1	b,8,+1
953.405	1	y,7,+1
1047.29	1	b,9,+1
1050.56	1	y-H2O,8,+1
1160.47	1	b,10,+1
1393.61	1	b,11,+1



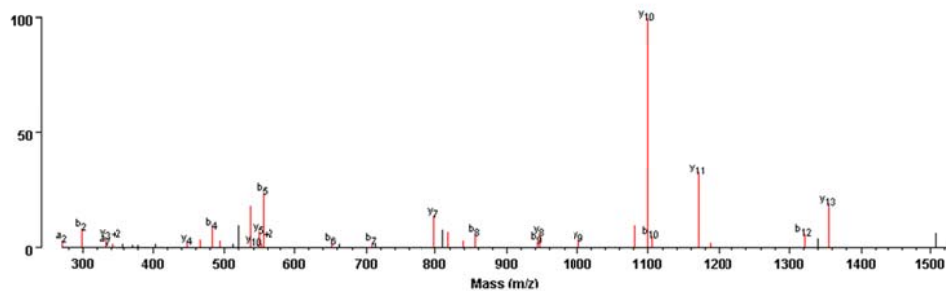
Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
GGKHK	3	766.0388	626.309	1	769.3952	631.341	1
KTGQAPGFSYTDANK			826.900	2		829.416	2

**GGK(XL:C-Thiol(Unsaturated))HK**



m/z	z	Ion Type
284.375	1	y,2,+1
343.093	1	b,3,+1
452.355	1	a,4,+1
463.112	1	b-NH3,4,+1
480.112	1	b,4,+1
511.901	1	y,3,+1

**K(XL:C-Alkene)TGQAPGFSYTDANK<sup>+2</sup>**

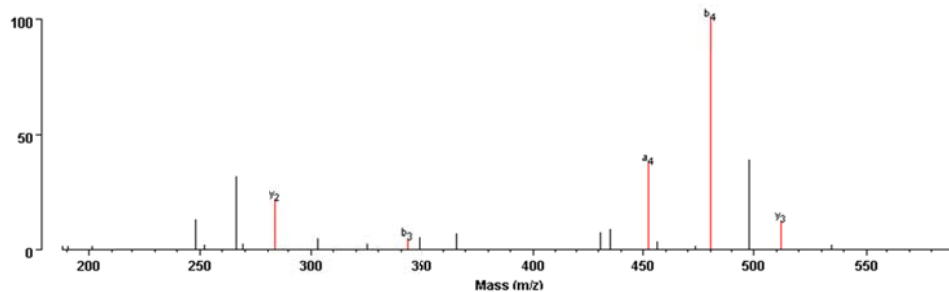


m/z	z	Ion Type
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270.416	1	a,2,+1
298.216	1	b,2,+1
332.351	1	y,3,+1
340.635	1	a,7,+2
447.253	1	y,4,+1
465.373	1	b-H <sub>2</sub> O,4,+1
483.166	1	b,4,+1
492.849	1	y-H <sub>2</sub> O,9,+2
		y-NH <sub>3</sub> ,9,+2
536.268	1	b-H <sub>2</sub> O,5,+1
548.377	1	y,5,+1
550.634	1	y,10,+2
554.401	1	b,5,+1
651.188	1	b,6,+1
708.25	1	b,7,+1
798.315	1	y,7,+1
818.18	1	MH-NH <sub>3</sub> ,,+2
		MH-H <sub>2</sub> O,,+2
838.446	1	b-NH <sub>3</sub> ,8,+1
855.248	1	b,8,+1
942.414	1	b,9,+1
945.59	1	y,8,+1
1002.4	1	y,9,+1
1081.22	1	y-H <sub>2</sub> O,10,+1
1099.3	1	y,10,+1
1105.34	1	b,10,+1
1170.39	1	y,11,+1
1188.29	1	b-H <sub>2</sub> O,11,+1
1321.04	1	b,12,+1
1355.27	1	y,13,+1

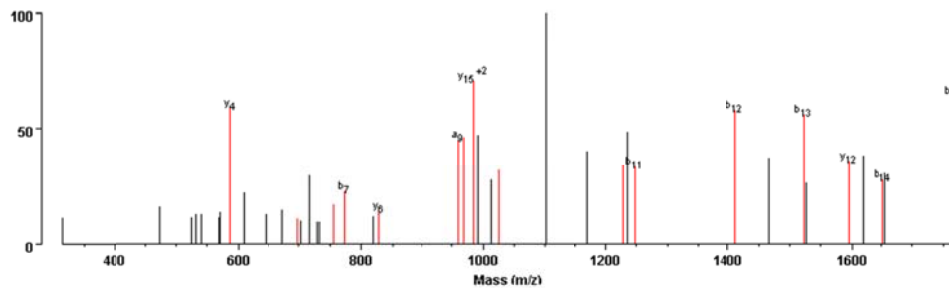
Peptide Sequence	z	d0-dmDSSO		d10-dmDSSO			
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
GGKHK	3	950.4685	626.308	1	953.82		
GITWGEETLMEYLENPKK			1119.520	2			

**GGK(XL:C-Thiol(Unsaturated))HK**



m/z	z	Ion Type
284.027	1	y,2,+1
343.032	1	b,3,+1
452.178	1	a,4,+1
480.164	1	b,4,+1
512.3	1	y,3,+1

**GITWGEETLMEYLENPK(XL:C-Thiol(Unsaturated))K<sup>+2</sup>**

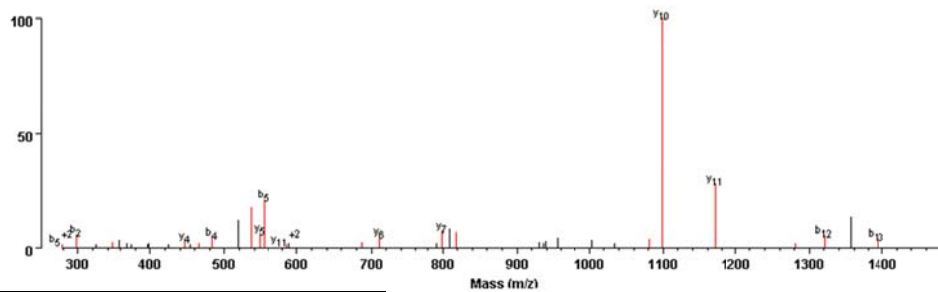


m/z	z	Ion Type
586.297	1	y,4,+1

697.65	1	y-H <sub>2</sub> O,5,+1
754.805	1	b-H <sub>2</sub> O,7,+1
773.175	1	b,7,+1
828.316	1	y,6,+1
959.483	1	a,9,+1
969.066	1	b-H <sub>2</sub> O,9,+1
984.334	1	y,15,+2
1025.88	1	y-NH <sub>3</sub> ,16,+2
		y-H <sub>2</sub> O,16,+2
1229.01	1	b-H <sub>2</sub> O,11,+1
1247.7	1	b,11,+1
1410.99	1	b,12,+1
1523.32	1	b,13,+1
1594.37	1	y,12,+1
1652.43	1	b,14,+1
1767.07	1	b,15,+1

Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
KTGQAPGFSYTDANK	4	899.9332	826.900	2	902.45		
KTGQAPGFSYTDANKNK			963.955	2			

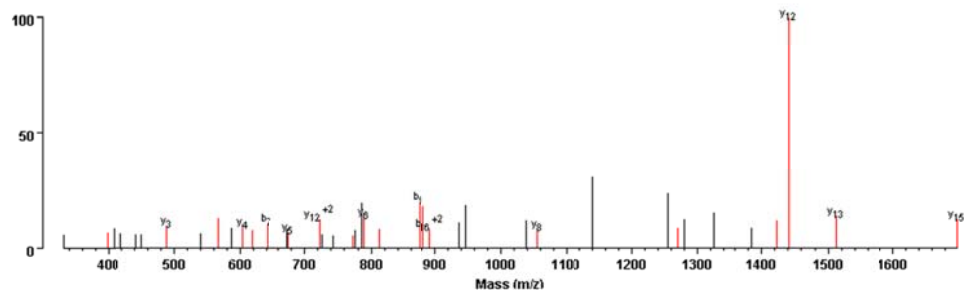
**K(XL:C-Alkene)TGQAPGFSYTDANK<sup>+2</sup>**



m/z	z	Ion Type
278.243	1	b <sub>5</sub> ,+2
298.276	1	b <sub>2</sub> ,+1
347.133	1	y-H <sub>2</sub> O, <sub>6</sub> ,+2
		y-NH <sub>3</sub> , <sub>6</sub> ,+2
447.218	1	y <sub>4</sub> ,+1
465.167	1	b-H <sub>2</sub> O, <sub>4</sub> ,+1
		y-NH <sub>3</sub> , <sub>8</sub> ,+2
483.324	1	b <sub>4</sub> ,+1
536.296	1	b-H <sub>2</sub> O, <sub>5</sub> ,+1
548.279	1	y <sub>5</sub> ,+1
554.072	1	b <sub>5</sub> ,+1
585.671	1	y <sub>11</sub> ,+2
687.447	1	b-H <sub>2</sub> O, <sub>13</sub> ,+2
711.469	1	y <sub>6</sub> ,+1
798.661	1	y <sub>7</sub> ,+1
817.673	1	MH-H <sub>2</sub> O <sub>1</sub> ,+2

1081.4	1	y-H2O,10,+1
1099.32	1	y,10,+1
1170.44	1	y,11,+1
1280.67	1	y-H2O,12,+1
1321.13	1	b,12,+1
1392.72	1	b,13,+1
1488.99	1	b-H2O,14,+1

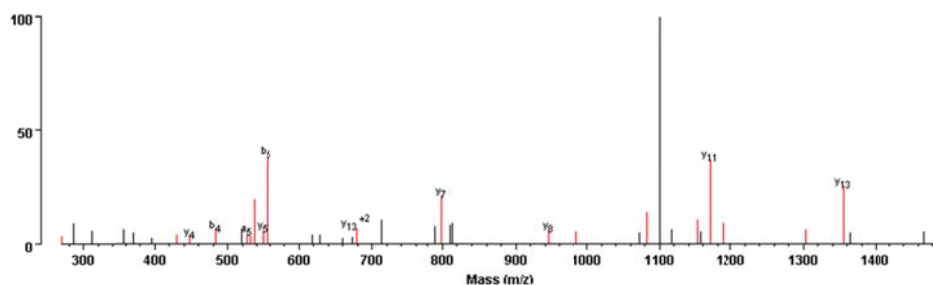
**KTGQAPGFSYTDANK(XL:C-Thiol(Unsaturated))NK<sup>+2</sup>**



m/z	z	Ion Type
398.319	1	b-NH3,4,+1
489.176	1	y,3,+1
566.715	1	b-NH3,6,+1
603.415	1	y,4,+1
618.093	1	b-H2O,12,+2
640.681	1	b,7,+1
674.505	1	y,5,+1
721.883	1	y,12,+2
772.583	1	y-NH3,6,+1
789.244	1	y,6,+1
812.239	1	y-NH3,14,+2
		y-H2O,14,+2
874.377	1	b,9,+1
882.069	1	b-H2O,16,+2
		b-NH3,16,+2
891.392	1	y-NH3,16,+2
		y-H2O,16,+2
		b,16,+2
1053.83	1	y,8,+1
1269.6	1	y-H2O,10,+1
1423.38	1	y-H2O,12,+1
1441.77	1	y,12,+1
1512.91	1	y,13,+1
1697.28	1	y,15,+1

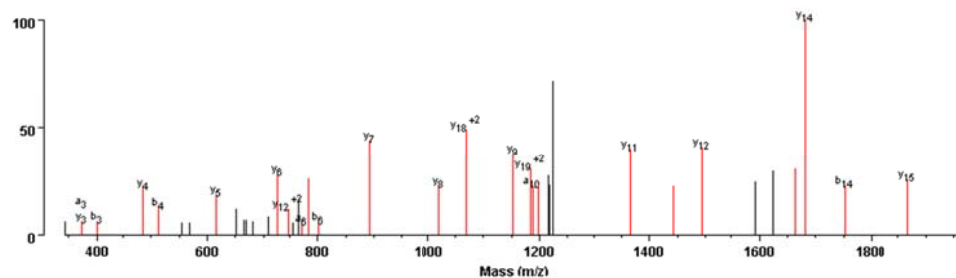
Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
KTGQAPGFSYTDANK NKGITWGEETLMEYLENPKK	4	1038.255	826.901	2	1040.76		
			1240.599	2			

**K(XL:C-Alkene)TGQAPGFSYTDANK<sup>+2</sup>**



m/z	z	Ion Type
269.411	1	b-NH3,5,+2
430.136	1	y-NH3,4,+1
447.345	1	y,4,+1
483.145	1	b,4,+1
526.781	1	a,5,+1
531.392	1	y-NH3,5,+1
536.214	1	b-H2O,5,+1
548.248	1	y,5,+1
554.19	1	b,5,+1
678.843	1	y,13,+2
798.384	1	y,7,+1
945.49	1	y,8,+1
985.629	1	y-NH3,9,+1
1082.69	1	y-NH3,10,+1
1152.94	1	y-H2O,11,+1
		y-NH3,11,+1
1170.37	1	y,11,+1
1188.57	1	b-H2O,11,+1
1303.32	1	b-H2O,12,+1
1355.49	1	y,13,+1
1489.04	1	b-H2O,14,+1

**NK(XL:C-Thiol(Unsaturated))GITWGEETLMEYLENPKK<sup>+2</sup>**

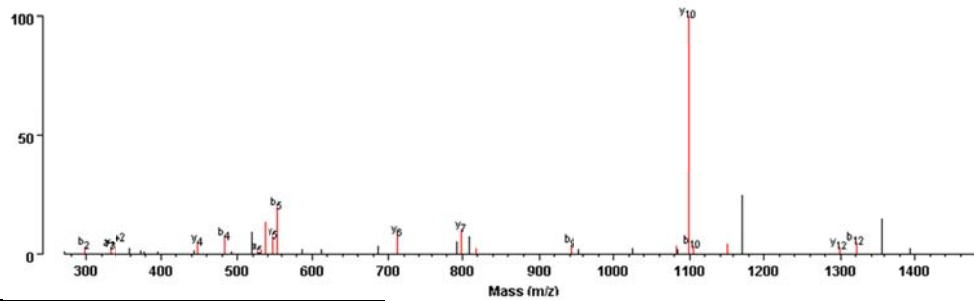


m/z	z	Ion Type
372.587	1	y,3,+1
		a,3,+1
399.665	1	b,3,+1
486.144	1	y,4,+1
513.225	1	b,4,+1
615.384	1	y,5,+1
728.264	1	y,6,+1
747.326	1	y,12,+2
772.448	1	a,6,+1
783.424	1	b-NH3,6,+1
800.194	1	b,6,+1
891.369	1	y,7,+1
1020.66	1	y,8,+1
1069.93	1	y,18,+2
1151.45	1	y,9,+1
1183.49	1	y,19,+2
1188.81	1	a,10,+1
1198	1	b-H2O,10,+1
1365.54	1	y,11,+1
1443.22	1	b-NH3,12,+1
		b-H2O,12,+1
1494.9	1	y,12,+1
1662.83	1	y-H2O,14,+1
1680.63	1	y,14,+1
1753.23	1	b,14,+1
1866.79	1	y,15,+1



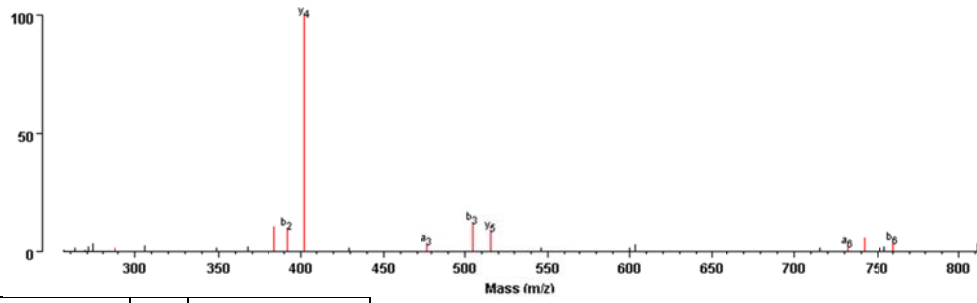
Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
K <b>TL</b> QAPGFSYTDANK KYIPGTK	3	859.4291	826.900	2	862.78		
			906.477	1			

**K(XL:C-Alkene)TGQAPGFSYTDANK<sup>+2</sup>**



m/z	z	Ion Type
298.338	1	b,2,+1
332.252	1	y,3,+1
340.191	1	a,7,+2
447.193	1	y,4,+1
483.114	1	b,4,+1
526.139	1	a,5,+1
530.727	1	y-H <sub>2</sub> O,5,+1
		y-NH <sub>3</sub> ,5,+1
536.388	1	b-H <sub>2</sub> O,5,+1
548.286	1	y,5,+1
554.355	1	b,5,+1
711.43	1	y,6,+1
798.217	1	y,7,+1
817.864	1	MH-H <sub>2</sub> O,,+2
		MH-NH <sub>3</sub> ,,+2
942.458	1	b,9,+1
1082.38	1	y-NH <sub>3</sub> ,10,+1
1099.4	1	y,10,+1
1105.06	1	b,10,+1
1152.58	1	y-H <sub>2</sub> O,11,+1
1299.13	1	y,12,+1
1321.25	1	b,12,+1

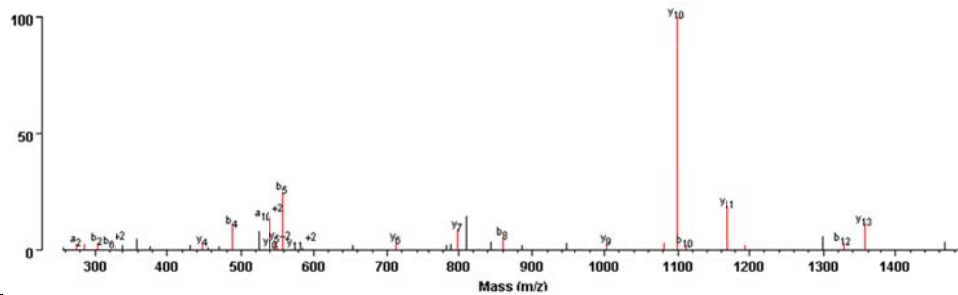
### K(XL:C-Thiol(Unsaturated))YIPGTK



m/z	z	Ion Type
287.202	1	y-H2O,3,+1
384.052	1	y-H2O,4,+1
391.996	1	b,2,+1
402.323	1	y,4,+1
477.141	1	a,3,+1
505.135	1	b,3,+1
515.413	1	y,5,+1
732.245	1	a,6,+1
742.302	1	b-H2O,6,+1
760.123	1	b,6,+1

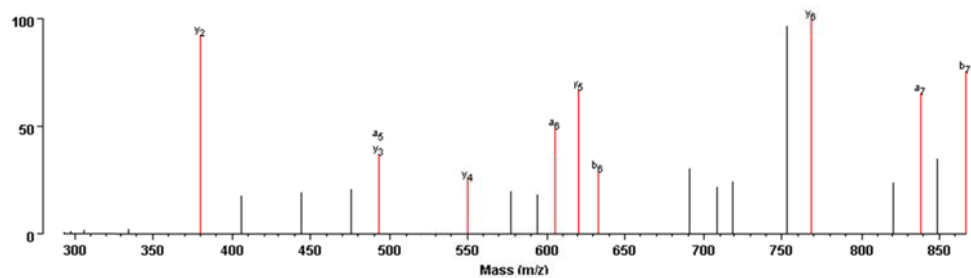
Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
KTGQAPGFSYTDANK MIFAGIKK	3	893.12			896.4719	829.416	2
						1012.573	1

**K(XL:D-Alkene)TGQAPGFSYTDANK<sup>+2</sup>**



m/z	z	Ion Type
275.471	1	a,2,+1
285.272	1	b-H2O,2,+1
303.632	1	b,2,+1
329.172	1	b,6,+2
447.442	1	y,4,+1
488.282	1	b,4,+1
541.204	1	y-H2O,10,+2
		b-H2O,5,+1
		y-NH3,10,+2
		a,10,+2
548.337	1	y,5,+1
550.589	1	y,10,+2
559.324	1	b,5,+1
585.875	1	y,11,+2
711.37	1	y,6,+1
798.418	1	y,7,+1
860.179	1	b,8,+1
1002.64	1	y,9,+1
1081.89	1	y-H2O,10,+1
		y-NH3,10,+1
1099.5	1	y,10,+1
1110.52	1	b,10,+1
1170.43	1	y,11,+1
1194.46	1	b-NH3,11,+1
1326.87	1	b,12,+1
1355.37	1	y,13,+1
1493.41	1	b-H2O,14,+1

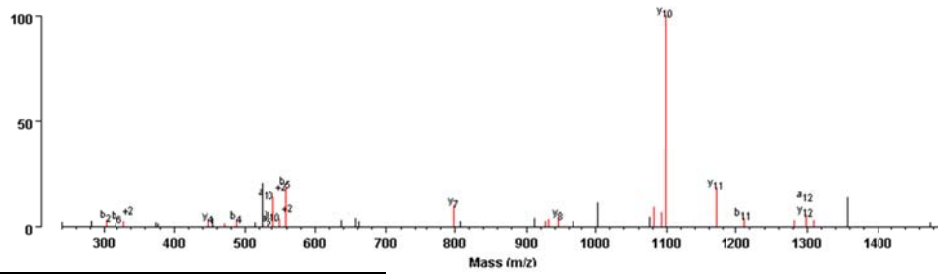
### MIFAGIK(XL:D-Thiol(Unsaturated))K



m/z	z	Ion Type
380.246	1	y,2,+1
492.863	1	y,3,+1
		a,5,+1
550.307	1	y,4,+1
605.153	1	a,6,+1
621.202	1	y,5,+1
633.186	1	b,6,+1
768.432	1	y,6,+1
838.412	1	a,7,+1
866.385	1	b,7,+1

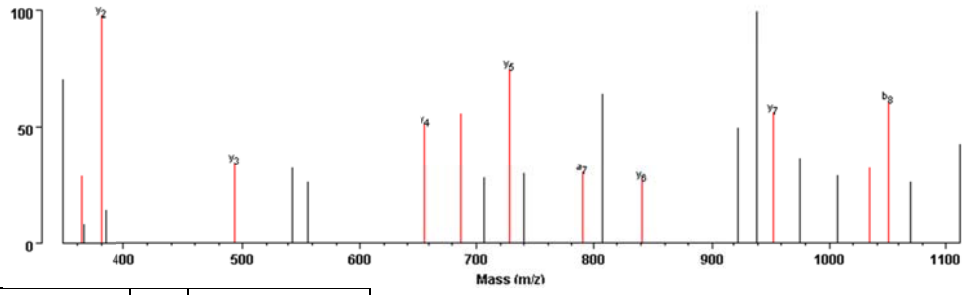
Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
K <b>TGQAPGFSYTDANK</b> EDLIAYLK <b>K</b>	3	954.8138	826.898	2	958.1652	829.414	2
			1192.630	1		1197.663	1

**K(XL:D-Alkene)TGQAPGFSYTDANK<sup>+2</sup>**



m/z	z	Ion Type
303.217	1	b,2,+1
328.412	1	b,6,+2
447.395	1	y,4,+1
470.227	1	b-H2O,4,+1
488.188	1	b,4,+1
531.601	1	a,5,+1
		y-NH3,5,+1
541.375	1	b-H2O,5,+1
		y-H2O,10,+2
		y-NH3,10,+2
		a,10,+2
549.975	1	y,10,+2
559.022	1	b,5,+1
798.555	1	y,7,+1
927.316	1	y-H2O,8,+1
930.749	1	b-NH3,9,+1
945.376	1	y,8,+1
1081.62	1	y-H2O,10,+1
1092.53	1	b-H2O,10,+1
1099.35	1	y,10,+1
1170.53	1	y,11,+1
1212.04	1	b,11,+1
1281.67	1	y-
1298.39	1	y,12,+1
		a,12,+1
1308.58	1	b-H2O,12,+1

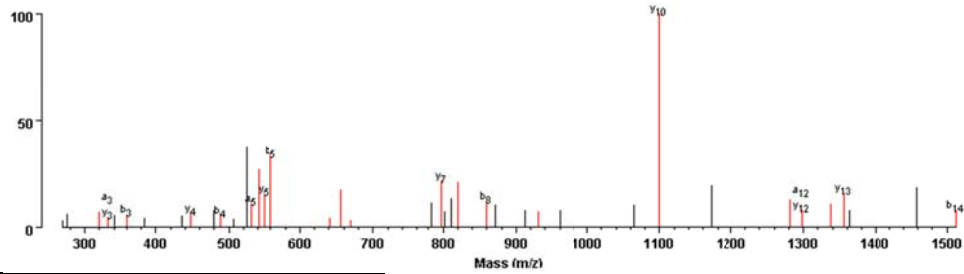
**EDLIAYLK(XL:D-Thiol(Unsaturated))K**



m/z	z	Ion Type
363.128	1	y-NH <sub>3</sub> ,2,+1
380.249	1	y,2,+1
493.359	1	y,3,+1
656.59	1	y,4,+1
687.042	1	b-H <sub>2</sub> O,6,+1
727.468	1	y,5,+1
790.959	1	a,7,+1
840.518	1	y,6,+1
953.572	1	y,7,+1
1033.45	1	b-H <sub>2</sub> O,8,+1
1051.58	1	y-NH <sub>3</sub> ,8,+1
		b,8,+1

Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
KTGQAPGFSYTDANK	4	801.65			804.4185	829.418	2
GEREDLIAYLKK						770.418	2

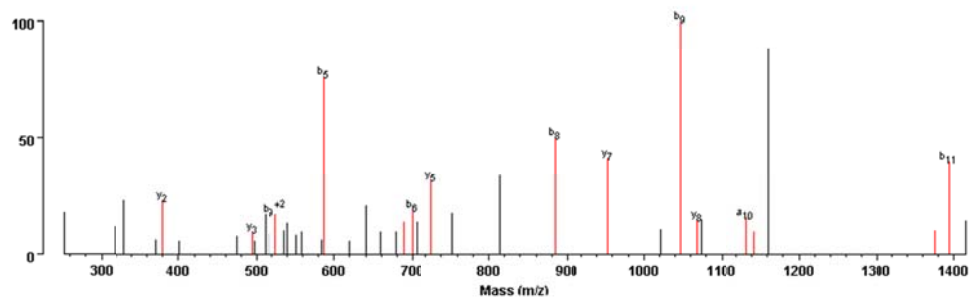
**K(XL:D-Alkene)TGQAPGFSYTDANK<sup>+2</sup>**



m/z	z	Ion Type
319.249	1	b-H2O,6,+2
332.112	1	y,3,+1
		a,3,+1
360.517	1	b,3,+1
447.206	1	y,4,+1
488.189	1	b,4,+1
531.235	1	y-NH3,5,+1
		a,5,+1
541.15	1	y-H2O,10,+2
		b-H2O,5,+1
		y-NH3,10,+2
548.075	1	y,5,+1
559.482	1	b,5,+1
640.819	1	y-H2O,12,+2
		y-NH3,12,+2
655.748	1	b-NH3,12,+2
669.429	1	y-H2O,13,+2
		y-NH3,13,+2
798.146	1	y,7,+1
820.915	1	MH-NH3,,+2
		MH-H2O,,+2
859.933	1	b,8,+1
930.227	1	b-NH3,9,+1
1099.42	1	y,10,+1
1281.65	1	y-NH3,12,+1
1298.53	1	y,12,+1
		a,12,+1

1338.01	1	y-H <sub>2</sub> O,13,+1
		y-NH <sub>3</sub> ,13,+1
1355.23	1	y,13,+1
1511.71	1	b,14,+1

**GEREDLIAYLK(XL:D-Thiol(Unsaturated))K<sup>+2</sup>**



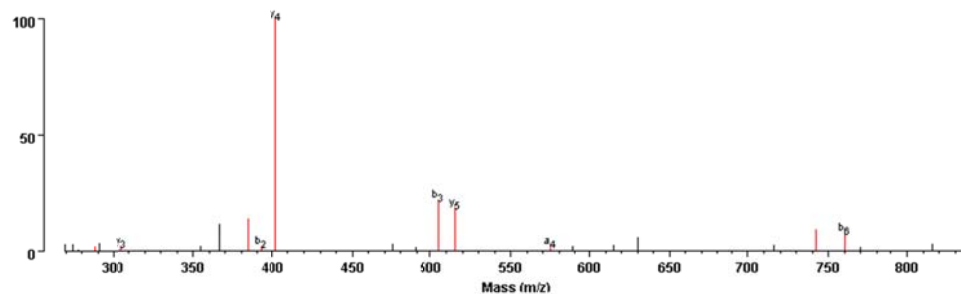
m/z	z	Ion Type
380.284	1	y,2,+1
493.333	1	y,3,+1
524.644	1	b,9,+2
587.252	1	b,5,+1
688.344	1	b-H <sub>2</sub> O,11,+2
		b-NH <sub>3</sub> ,11,+2
700.555	1	b,6,+1
727.021	1	y,5,+1
884.54	1	b,8,+1
953.352	1	y,7,+1
1047.31	1	b,9,+1
1068.47	1	y,8,+1
1132.31	1	a,10,+1
1142.72	1	b-H <sub>2</sub> O,10,+1
1375.7	1	b-H <sub>2</sub> O,11,+1
1393.34	1	b,11,+1





1738.95	1	y,14,+1
1839.58	1	y,15,+1
1962.37	1	b,16,+1

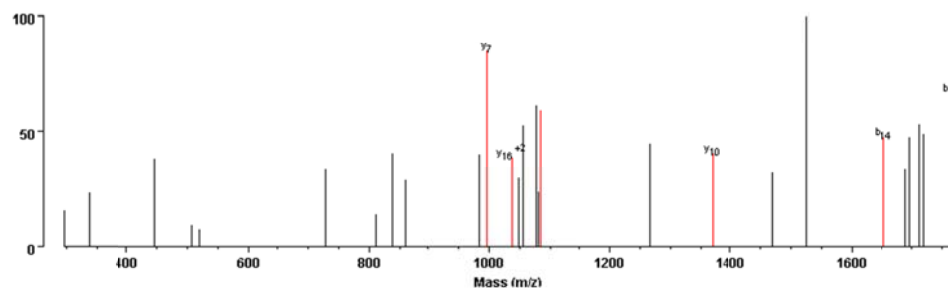
**K(XL:C-Thiol(Unsaturated))YIPGTK**



m/z	z	Ion Type
288.354	1	y-NH3,3,+1
305.166	1	y,3,+1
384.296	1	y-H2O,4,+1
392.182	1	b,2,+1
402.279	1	y,4,+1
505.331	1	b,3,+1
515.149	1	y,5,+1
574.852	1	a,4,+1
742.314	1	b-H2O,6,+1
759.919	1	b,6,+1

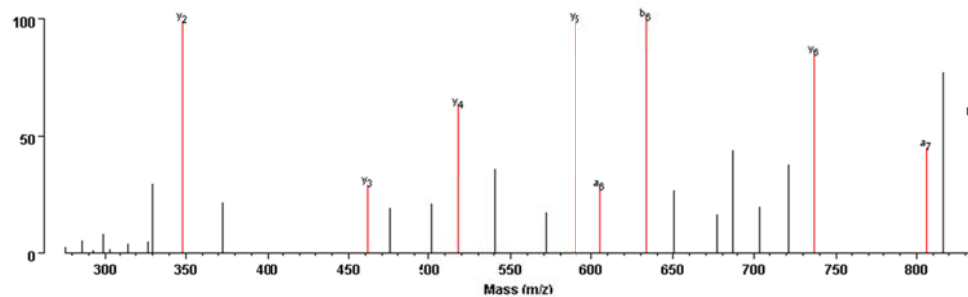
Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
GITWGEETLMEYLENPKK MIFAGIKK	3	1077.54			1080.8999	1122.044	2
						980.604	1

**GITWGEETLMEYLENPK(XL:D-Thiol(Unsaturated))K<sup>+2</sup>**



m/z	z	Ion Type
996.347	1	y,7,+1
1037.38	1	y,16,+2
1084.5	1	y-H2O,17,+2
		y-NH3,17,+2
1370.22	1	y,10,+1
1653.26	1	b,14,+1
1766.69	1	b,15,+1

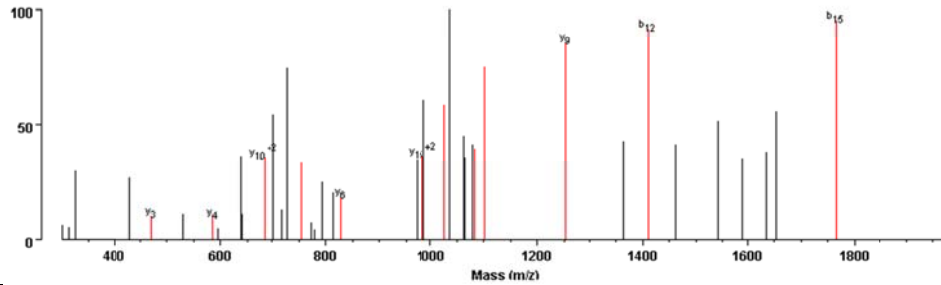
**MIFAGIK(XL:D-Alkene)K**



m/z	z	Ion Type
348.376	1	y,2,+1
461.358	1	y,3,+1
518.38	1	y,4,+1
589.355	1	y,5,+1
605.201	1	a,6,+1
633.355	1	b,6,+1
736.568	1	y,6,+1
806.417	1	a,7,+1
834.264	1	b,7,+1

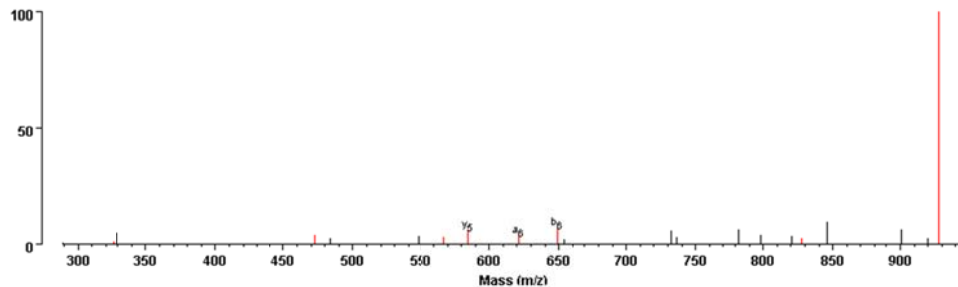
Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
GITWGEETLMEYLENPKK M(ox)IFAGIKK	3	1081.8778	1119.523 991.571	2 1	1085.23		

**GITWGEETLMEYLENPK(XL:C-Thiol(Unsaturated))K<sup>+2</sup>**



m/z	z	Ion Type
472.028	1	y,3,+1
586.262	1	y,4,+1
683.192	1	y,10,+2
755.359	1	b-H2O,7,+1
828.304	1	y,6,+1
984.096	1	y,15,+2
1025.96	1	y-NH3,16,+2
		y-H2O,16,+2
1082.06	1	y-H2O,17,+2
		y-NH3,17,+2
1100.57	1	b-H2O,10,+1
1251.7	1	y,9,+1
1410.22	1	b,12,+1
1766.53	1	b,15,+1

**M(Oxidation)IFAGIK(XL:C-Alkene)K**

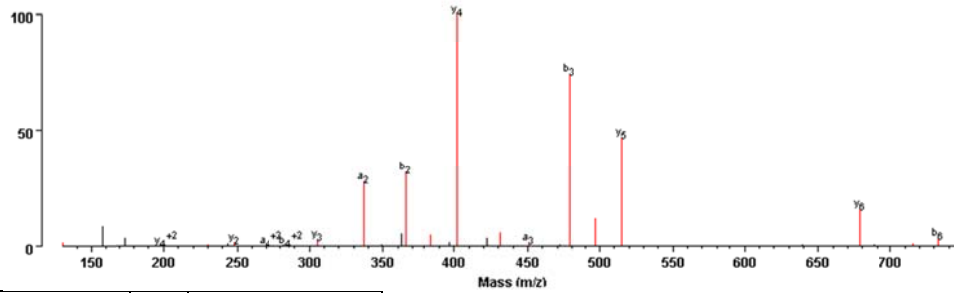


m/z	z	Ion Type
325.631	1	y-NH3,2,+1
472.352	1	b-SOCH4,5,+1
567.507	1	y-NH3,5,+1

584.616	1	y,5,+1
620.987	1	a,6,+1
649.261	1	b,6,+1
827.487	1	y-NH3,7,+1
927.438	1	MH-SOCH4,,+1

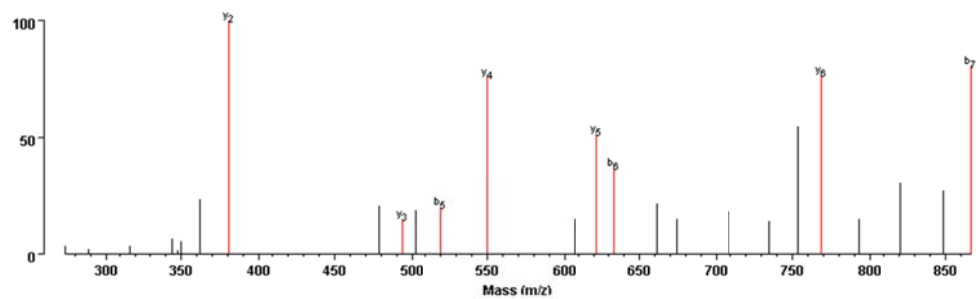
Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
KYIPGTK	3	633.69			637.0419	440.271	2
M(ox)IFAGIKK						1012.574	1

**K(XL:D-Alkene)YIPGTK<sup>+2</sup>**



m/z	z	Ion Type
130.153	1	y-NH3,1,+1
202.138	1	y,4,+2
230.099	1	y-H2O,2,+1
248.159	1	y,2,+1
274.239	1	a,4,+2
288.279	1	b,4,+2
		y-NH3,3,+1
305.296	1	y,3,+1
337.255	1	a,2,+1
365.231	1	b,2,+1
384.347	1	y-H2O,4,+1
402.313	1	y,4,+1
431.278	1	MH-H2O,,+2
		MH-NH3,,+2
450.436	1	a,3,+1
478.351	1	b,3,+1
497.198	1	y-H2O,5,+1
515.369	1	y,5,+1
678.517	1	y,6,+1
715.368	1	b-H2O,6,+1
733.092	1	b,6,+1

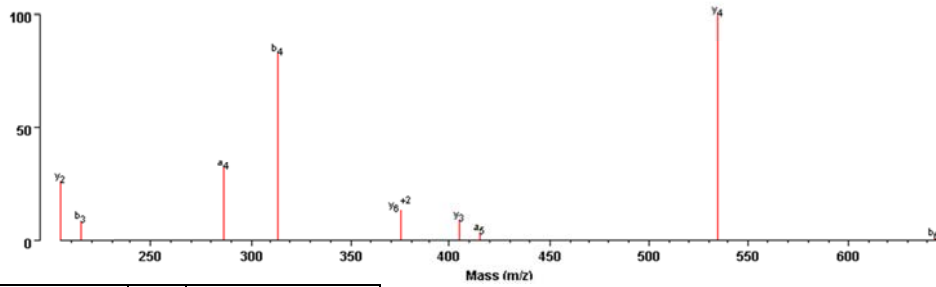
### MIFAGIK(XL:D-Thiol(Unsaturated))K



m/z	z	Ion Type
380.263	1	y,2,+1
493.268	1	y,3,+1
520.156	1	b,5,+1
550.34	1	y,4,+1
621.509	1	y,5,+1
633.389	1	b,6,+1
768.288	1	y,6,+1
866.275	1	b,7,+1

Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
Ac-GDVEK GK	3	412.2164	421.716	2	415.571	424.233	2
KK*			375.207*	1*		380.239*	1*

**M(Met-loss+Acetyl)GDVEK(AlkeneB:2H5)GK<sup>+2</sup>**

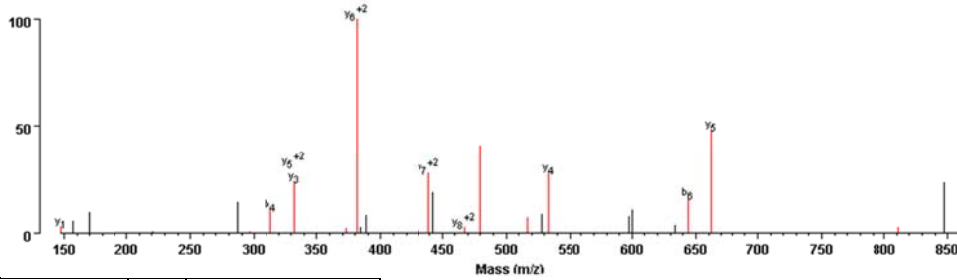


m/z	z	Ion Type
204.336	1	y,2,+1
214.851	1	b,3,+1
285.959	1	a,4,+1
313.909	1	b,4,+1
		b-H2O,6,+2
		b-NH3,6,+2
374.578	1	y,6,+2
405.2	1	y,3,+1
415.4	1	MH-H2O,,+2
		a,5,+1
		MH-NH3,,+2
534.373	1	y,4,+1
643.792	1	b,6,+1



Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
Ac-GDVEKGGK KK*	3	454.9164	485.767	2	458.2704	488.280	2
			375.207*	1*		380.239*	1*

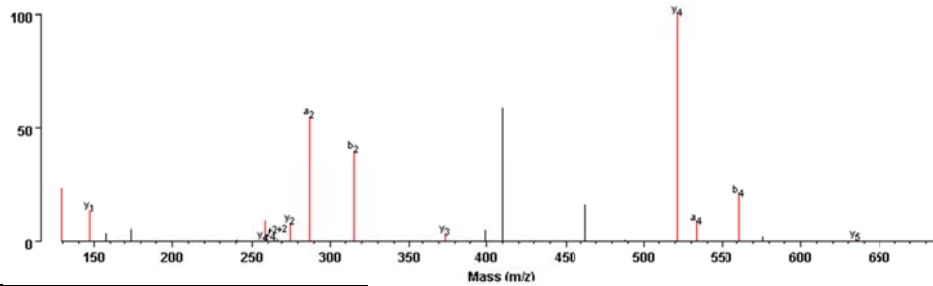
**M(Met-loss+Acetyl)GDVEK(AlkeneB:2H5)GKK<sup>+2</sup>**



m/z	z	Ion Type
146.958	1	y,1,+1
296.304	1	b-H2O,4,+1
313.91	1	b,4,+1
		b-NH3,6,+2
		b-H2O,6,+2
332.231	1	y,3,+1
		y,5,+2
372.608	1	y-NH3,6,+2
		y-H2O,6,+2
381.572	1	y,6,+2
429.936	1	y-H2O,7,+2
		y-NH3,7,+2
438.997	1	y,7,+2
467.353	1	y,8,+2
479.326	1	MH-H2O,,+2
		MH-NH3,,+2
516.724	1	y-NH3,4,+1
533.382	1	y,4,+1
644.303	1	b,6,+1
		y-H2O,5,+1
662.303	1	y,5,+1
811.501	1	b-H2O,8,+1
859.707	1	y-NH3,7,+1

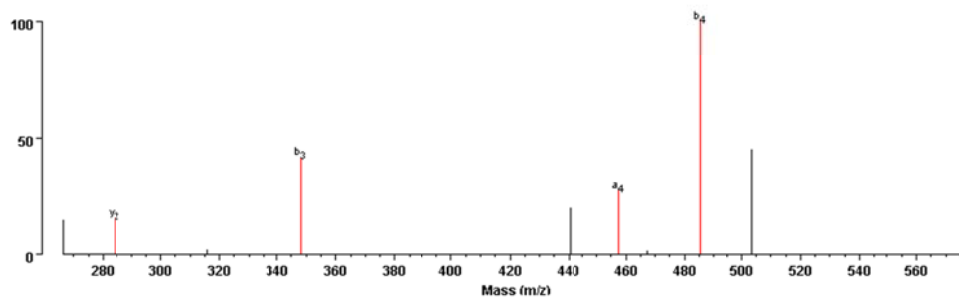
Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
KIFVQK	3	491.947	415.760	2	495.3013	418.279	2
GGKHK*			626.312*	1*		631.342	1

**K(AlkeneB:2H5)IFVQK<sup>+2</sup>**



m/z	z	Ion Type
129.025	1	y-NH3,2,+2
147.263	1	y,1,+1
258.263	1	y-NH3,2,+1
260.863	1	y,4,+2
267.203	1	a,4,+2
275.318	1	y,2,+1
287.269	1	a,2,+1
315.18	1	b,2,+1
374.183	1	y,3,+1
521.181	1	y,4,+1
533.45	1	a,4,+1
561.606	1	b,4,+1
634.442	1	y,5,+1

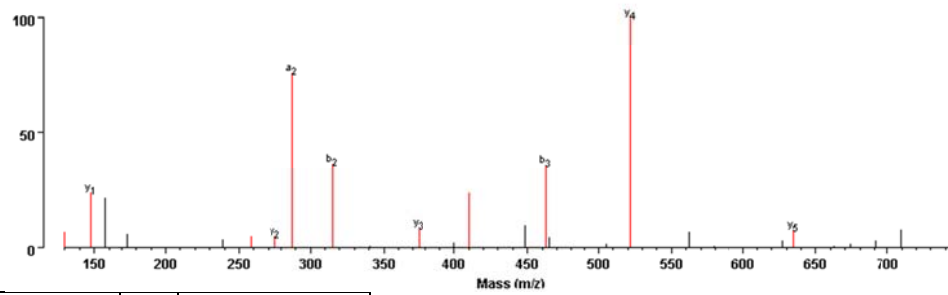
**GGK(ThioID:2H5)HK**



m/z	z	Ion Type
284.121	1	y,2,+1
348.282	1	b,3,+1
457.586	1	a,4,+1
485.436	1	b,4,+1

Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
KIFVQK KK*	3	408.2464	415.760	2	411.601	418.277	2
			375.207*	1*		380.24*	1*

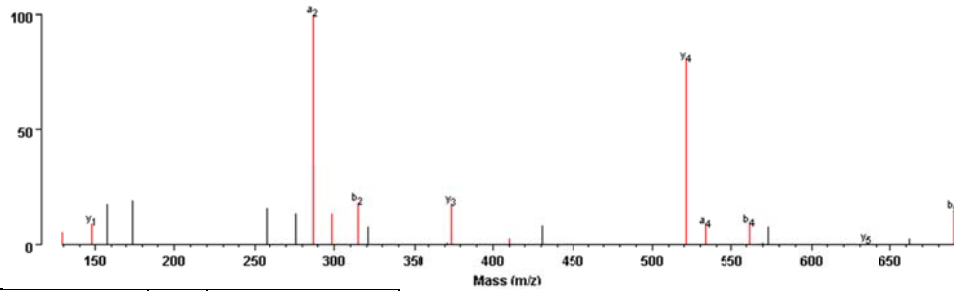
**K(AlkeneB:2H5)IFVQK<sup>+2</sup>**



m/z	z	Ion Type
129.26	1	y-NH3,2,+2
147.224	1	y,1,+1
258.344	1	y-NH3,2,+1
275.256	1	y,2,+1
287.161	1	a,2,+1
315.176	1	b,2,+1
374.069	1	y,3,+1
410.018	1	MH-NH3,,+2
462.219	1	b,3,+1
521.369	1	y,4,+1
634.426	1	y,5,+1

Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
KIFVQK	3	479.6041	415.764	2	482.957	418.277	2
KGER*			589.279*	1*		612.323*	1*

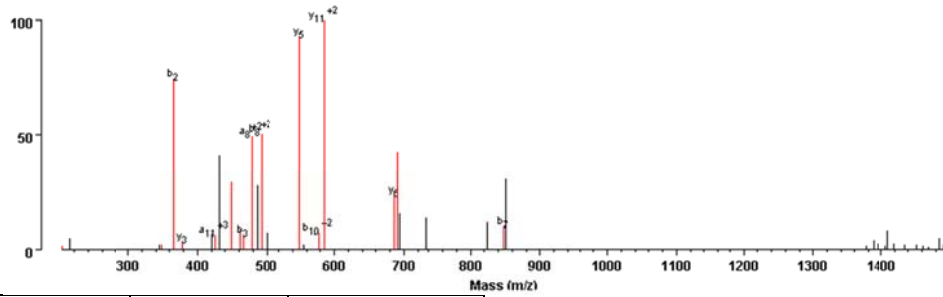
**K(AlkeneB:2H5)IFVQK<sup>+2</sup>**



m/z	z	Ion Type
129.137	1	y-NH <sub>3</sub> ,2,+2
147.496	1	y,1,+1
287.27	1	a,2,+1
298.48	1	b-NH <sub>3</sub> ,2,+1
315.081	1	b,2,+1
374.308	1	y,3,+1
410.076	1	MH-NH <sub>3</sub> ,,+2
521.185	1	y,4,+1
5.33E+02	1	a,4,+1
561.663	1	b,4,+1
634.405	1	y,5,+1
689.25	1	b,5,+1

Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
GGKHK*	5	429.8293	297.672*	2*	431.8418	300.189*	2*
HKTGPNLHGLFGR			511.929	3		513.607	3

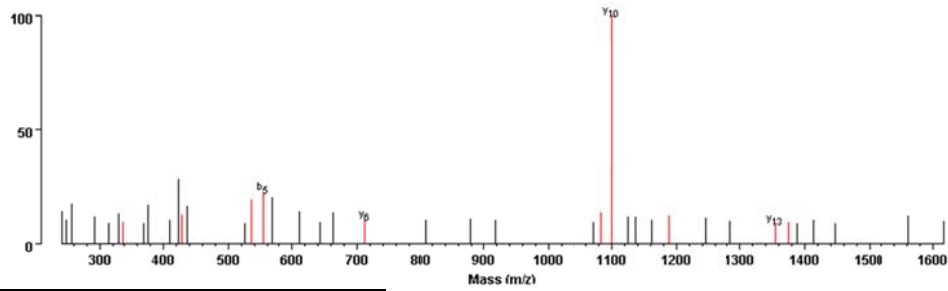
**HK(ThioD)TGPNLHGLFGR<sup>+3</sup>**



m/z	z	Ion Type
201.812	1	b-H2O,5,+3
		b-NH3,5,+3
349.135	1	b-NH3,2,+1
366.08	1	b,2,+1
378.993	1	y,3,+1
425.312	1	a,11,+3
449.26	1	b-H2O,3,+1
		y-NH3,8,+2
461.144	1	y-NH3,12,+3
467.004	1	b,3,+1
479.476	1	a,8,+2
493.352	1.00E+00	b,8,+2
549.152	1	y,5,+1
577.89	1	b,10,+2
585.024	1	y,11,+2
686.37	1	y,6,+1
689.963	1	y-H2O,12,+2
		y-NH3,12,+2
848.281	1	b,7,+1

Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
KTGQAPGFSYTDANK GITWGEETLMEYLENPKK*	4	981.715	826.899 1127.52*	2 2*	984.23		

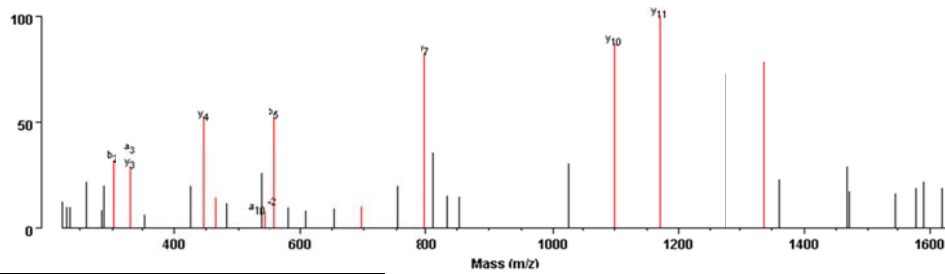
**K(AlkeneB)TGQAPGFSYTDANK<sup>+2</sup>**



m/z	z	Ion Type
337.725	1	b-NH3,3,+1
		b-H2O,3,+1
429.193	1	y-H2O,4,+1
536.13	1	b-H2O,5,+1
554.344	1	b,5,+1
711.674	1	y,6,+1
1082.66	1	y-NH3,10,+1
1099.27	1	y,10,+1
1188.29	1	b-H2O,11,+1
1355.16	1	y,13,+1
1374.75	1	b-H2O,13,+1

Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
K <b>TGQAPGFSYTDANK</b> KGER	3	753.6979	826.904	2	757.0514	829.419	2
			589.28*	1*		594.311*	1*

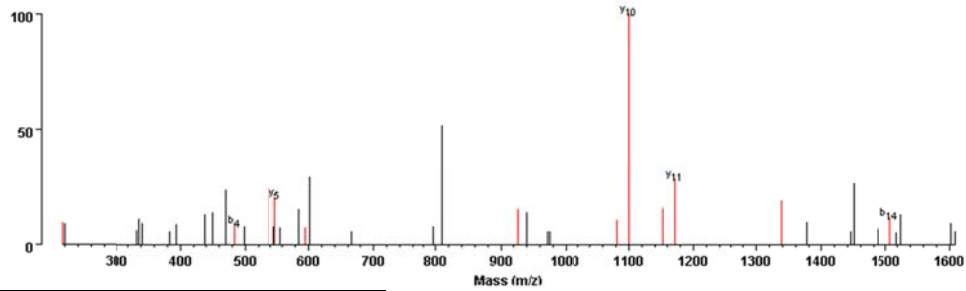
**K(AlkeneB:2H5)TGQAPGFSYTDANK<sup>+2</sup>**



m/z	z	Ion Type
302.791	1	b,2,+1
332.168	1	y,3,+1
		a,3,+1
446.892	1	y,4,+1
464.241	1	y-H2O,8,+2
		y-NH3,8,+2
541.393	1	b-H2O,5,+1
		y-H2O,10,+2
		y-NH3,10,+2
		a,10,+2
559.404	1	b,5,+1
696.286	1	b-NH3,7,+1
798.288	1	y,7,+1
1099.42	1	y,10,+1
1170.56	1	y,11,+1
1337.94	1	y-H2O,13,+1

Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
KTGQAPGFSYTDANK KATNE*	3	778.0289	842.887 630.311*	2 1*	781.3847	845.402 635.344*	2 1*

**K(AlkeneB)TGQAPGFSYTDANK<sup>+2</sup>**

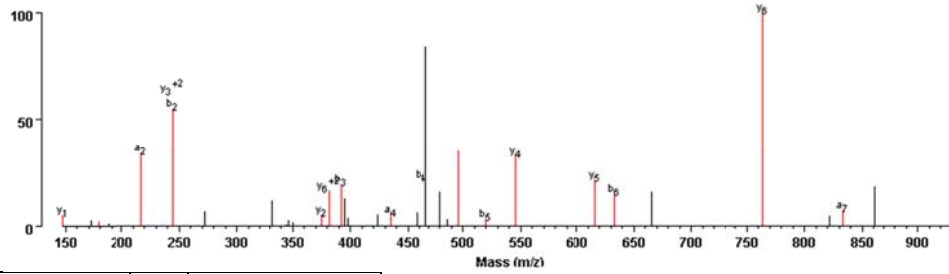


m/z	z	Ion Type
215.345	1	y-H <sub>2</sub> O,4,+2
		y-NH <sub>3</sub> ,4,+2
483.187	1	b,4,+1
537.327	1	b-NH <sub>3</sub> ,5,+1
548.167	1	y,5,+1
594.239	1	b-H <sub>2</sub> O,11,+2
925.394	1	b-NH <sub>3</sub> ,9,+1
1081.35	1	y-H <sub>2</sub> O,10,+1
1099.34	1	y,10,+1
1152.39	1	y-H <sub>2</sub> O,11,+1
1170.47	1	y,11,+1
1337.53	1	y-H <sub>2</sub> O,13,+1
1506.66	1	b,14,+1



Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
MIFAGIKK KGER*	4	396.2183	504.275 279.157*	2 2*	398.7339	506.790 281.672*	2 2*

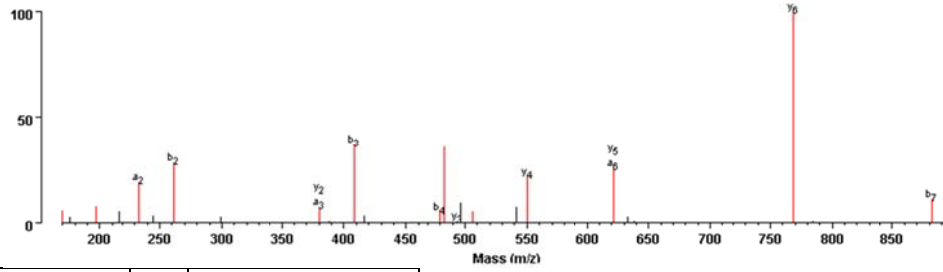
**MIFAGIK(ThioID)K<sup>+2</sup>**



m/z	z	Ion Type
147.132	1	y,1,+1
179.444	1	y-NH3,2,+2
217.314	1	a,2,+1
245.12	1	b,2,+1
		y,3,+2
375.174	1	y,2,+1
382.054	1	y,6,+2
392.246	1	b,3,+1
435.027	1	a,4,+1
462.885	1	b,4,+1
495.769	1	MH-NH3,,+2
520.335	1	b,5,+1
545.236	1	y,4,+1
616.193	1	y,5,+1
633.224	1	b,6,+1
763.264	1	y,6,+1
833.437	1	a,7,+1

Peptide Sequence	z	d0-dmDSSO			d10-dmDSSO		
		MS m/z	MS2 m/z	z	MS m/z	MS2 m/z	z
M(ox)IFAGIKK KGER*	4	400.2177	512.274	2	402.7331	514.787	2
			279.157*	2*		281.673*	2*

**M(Oxidation)IFAGIK(ThioID:2H5)K<sup>+2</sup>**



m/z	z	Ion Type
169.314	1	a-SOCH4,2,+1
197.278	1	b-SOCH4,2,+1
232.967	1	a,2,+1
261.123	1	b,2,+1
380.172	1	a,3,+1
		y,2,+1
408.303	1	b,3,+1
479.702	1	b,4,+1
483.131	1	MH-SOCH4,,+2
493.447	1	y,3,+1
506.433	1	MH-NH3,,+2
550.129	1	y,4,+1
621.197	1	a,6,+1
		y,5,+1
768.414	1	y,6,+1
882.518	1	b,7,+1