

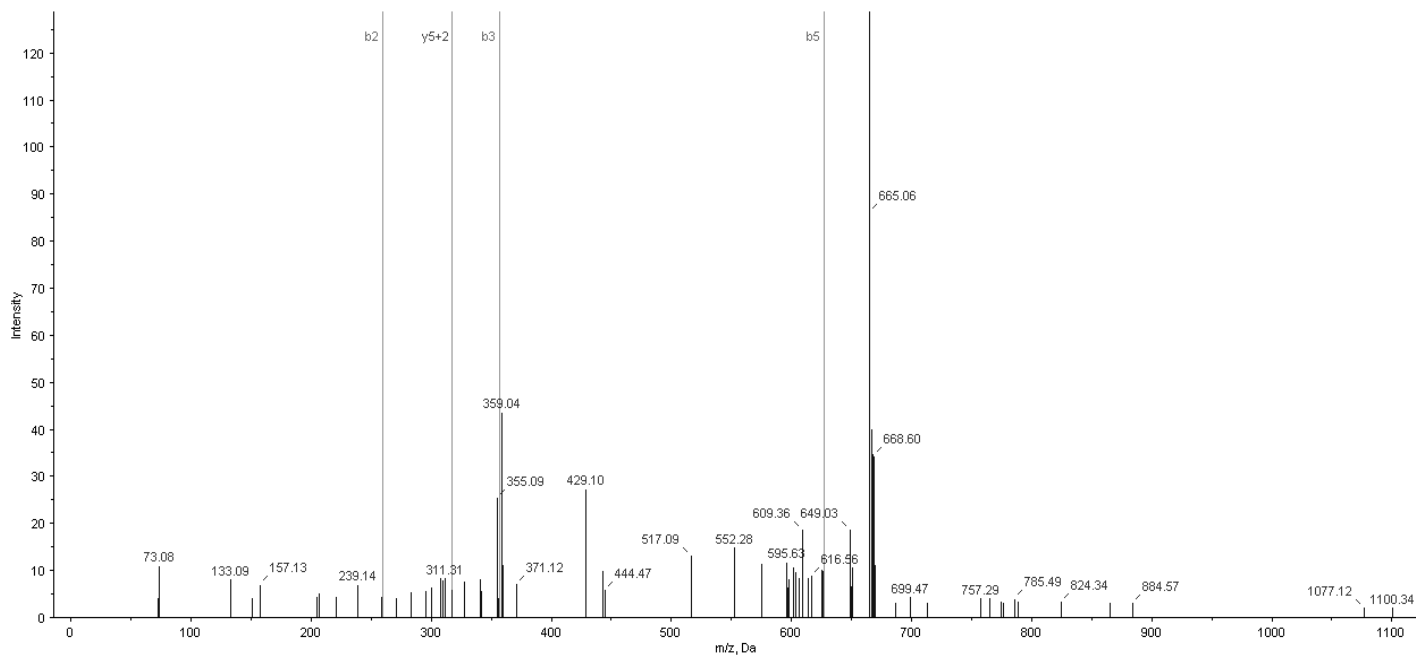
## MS spectra of the identified phosphopeptides in *Saccharopolyspora erythraea*

Name: SACE\_7106

Peptide PPL: EEPNRAA**T**AYK

Netphos Bac score: 0.173

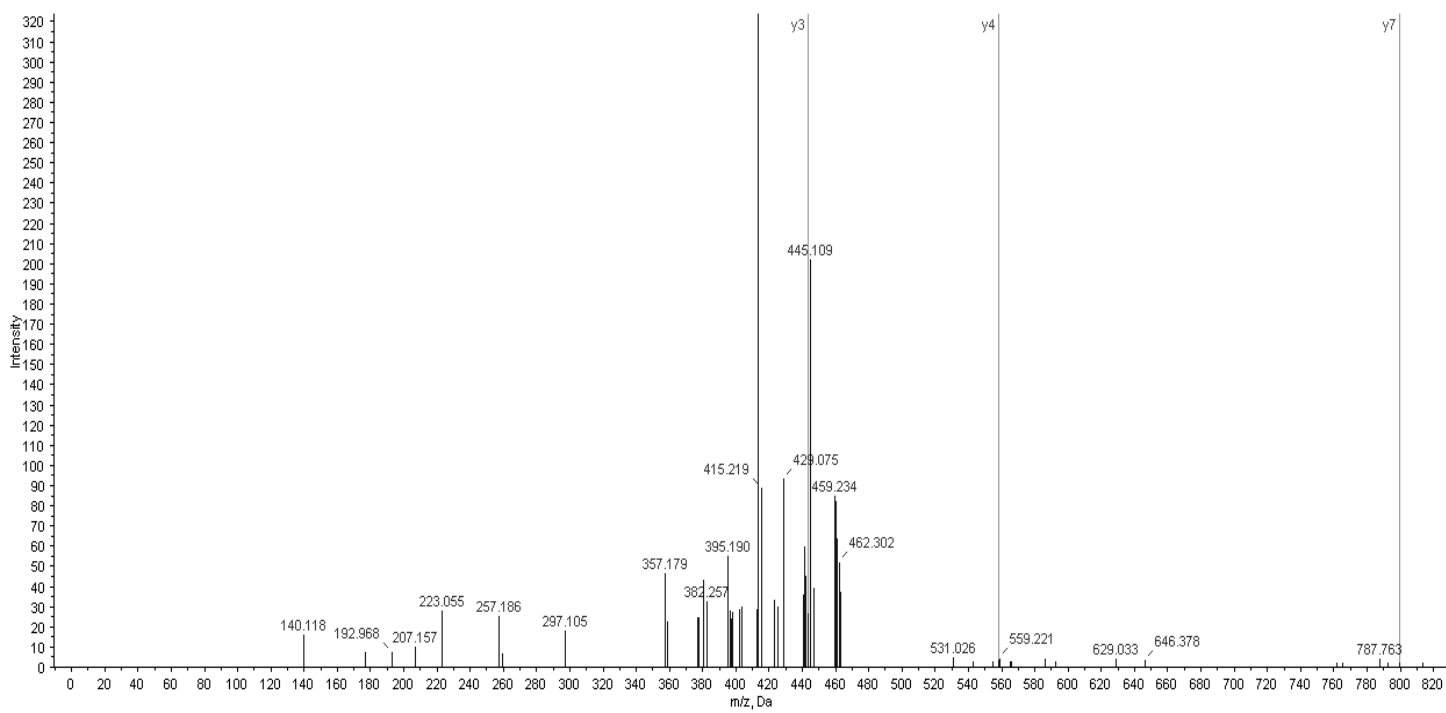
Netphos 2.0 score: 0.928



Peptide PPL: QVYGEAGLD**T**DK

Netphos Bac score: 0.177

Netphos 2.0 score: 0.931

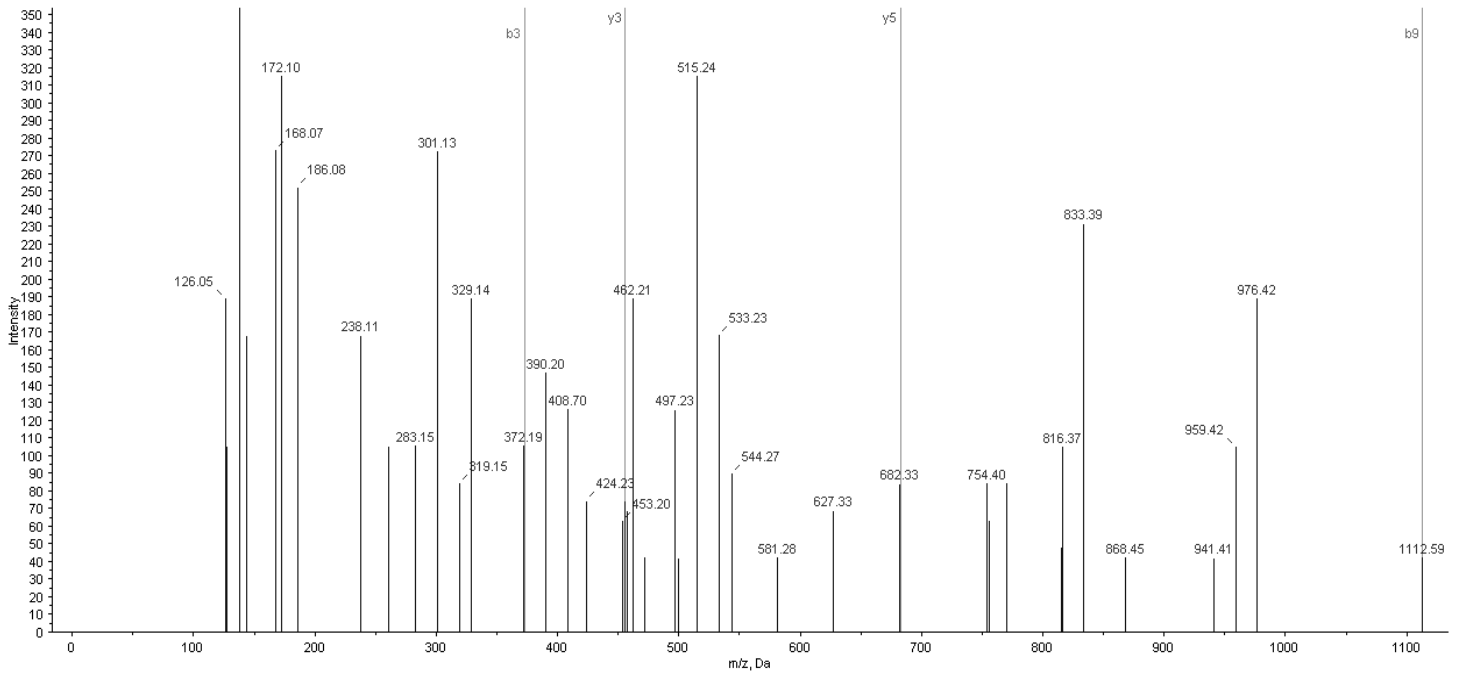


Name: SACE\_0414

Peptide PPL: EIERIMQVLSR

Netphos Bac score: 0.465

Netphos V2.0 score: 0.057

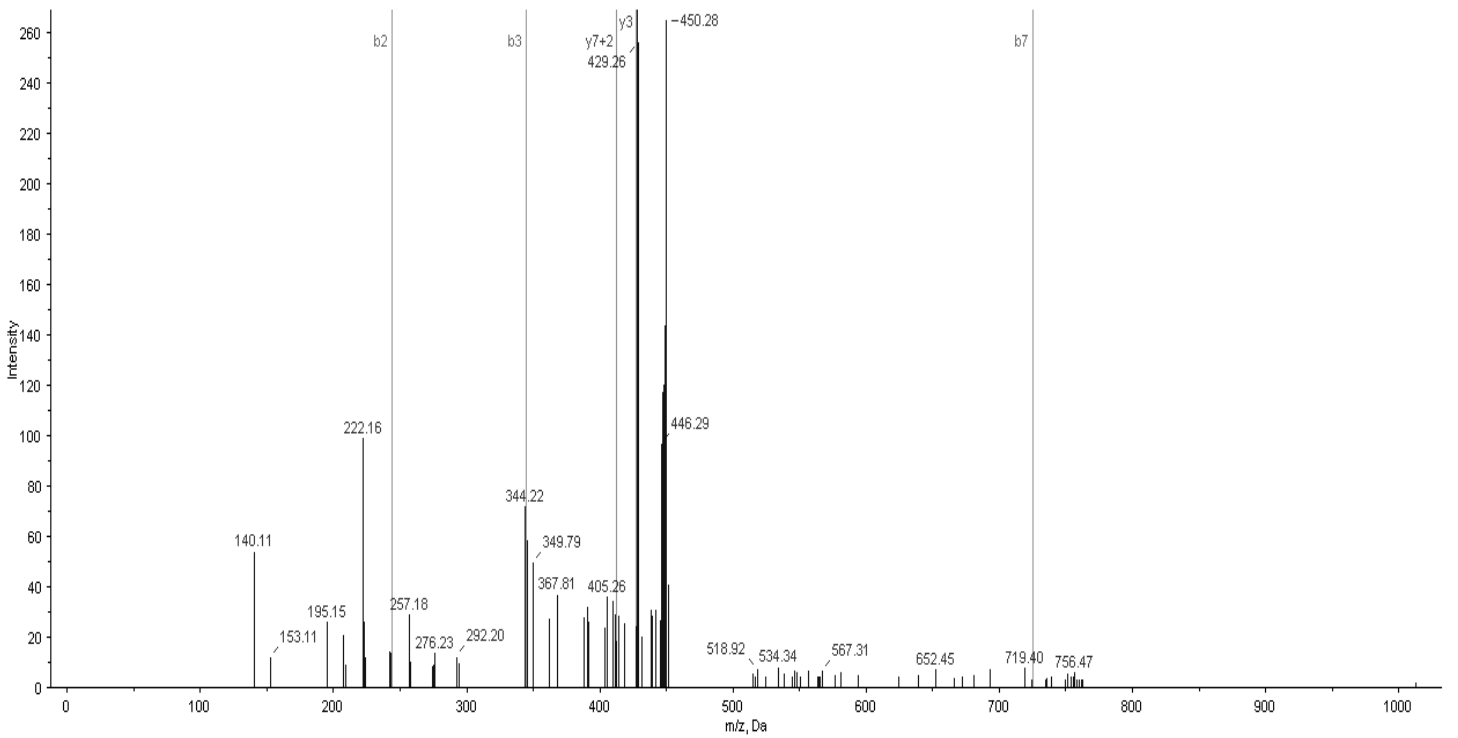


Name: SACE\_0519

Peptides PPL: ELTIGLPDAATR

Netphos Bac score: 0.160

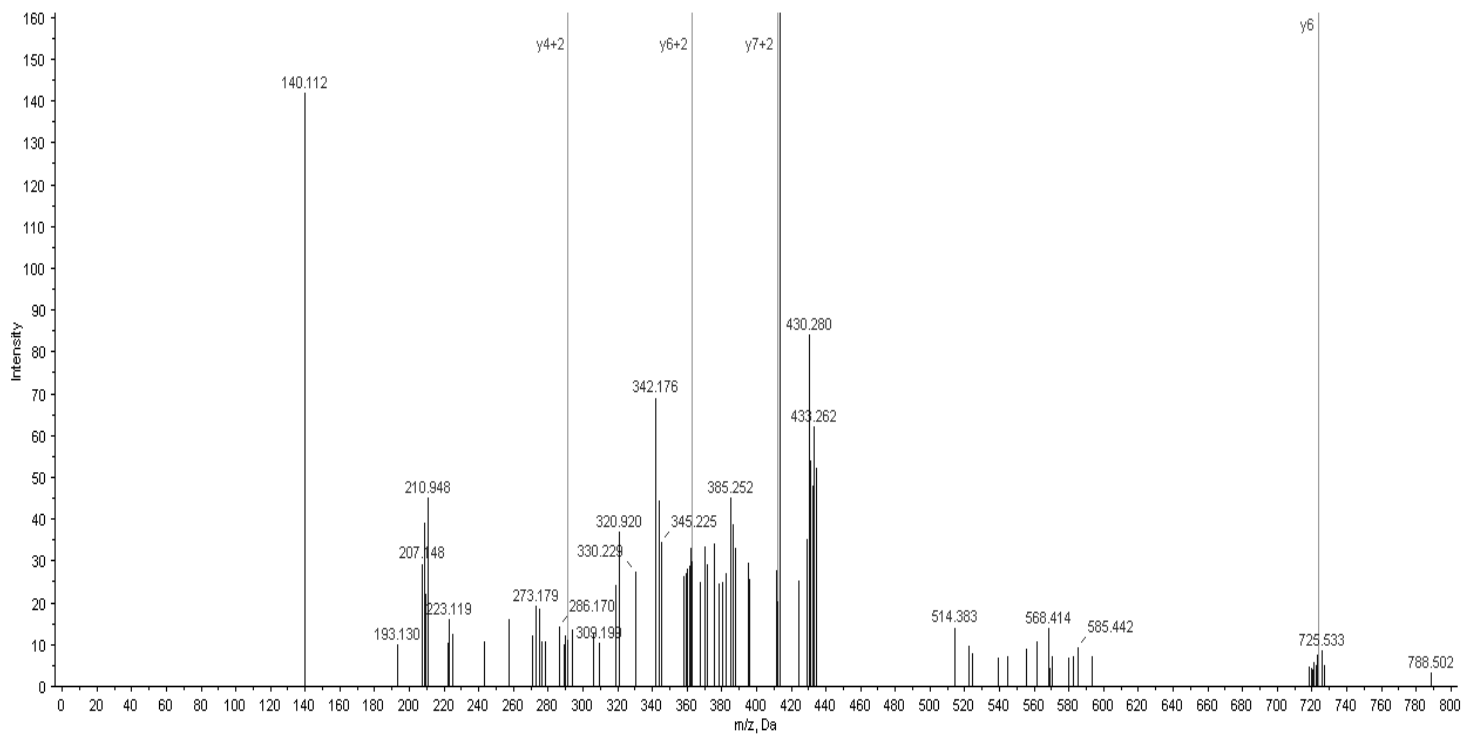
Netphos V2.0 score: 0.189



Peptide PPL: **E**SAVVAALRHR

Netphos Bac score: 0.534

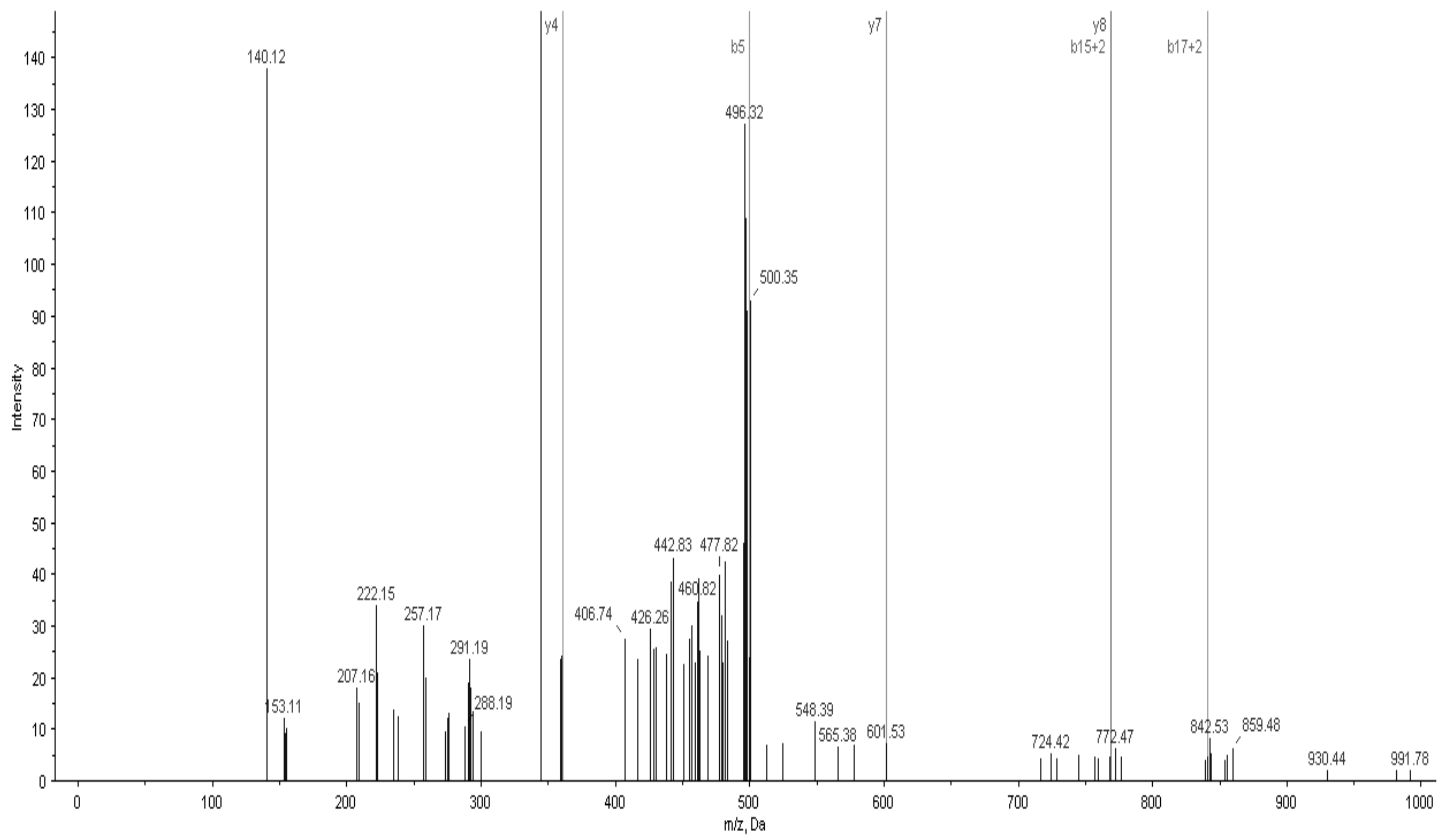
Netphos V2.0 score: 0.473



Peptide PPL: RLGATPHLGVLV**S**GPSGVGK

Netphos Bac score: 0.453

Netphos V2.0 score: 0.017

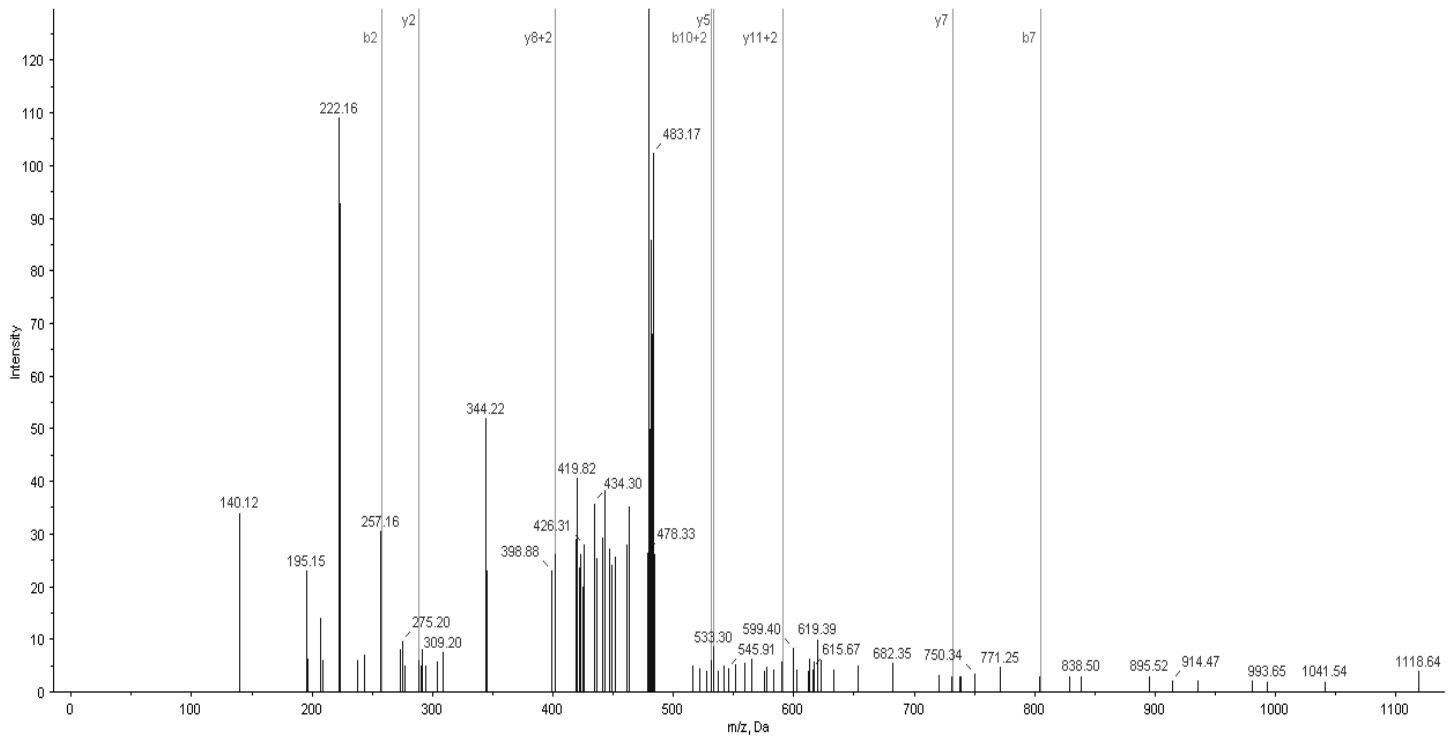


Name: SACE\_2875

Peptides PPL: QQPVTAVVTGSLR

Netphos Bac score: N/A due to length of the protein

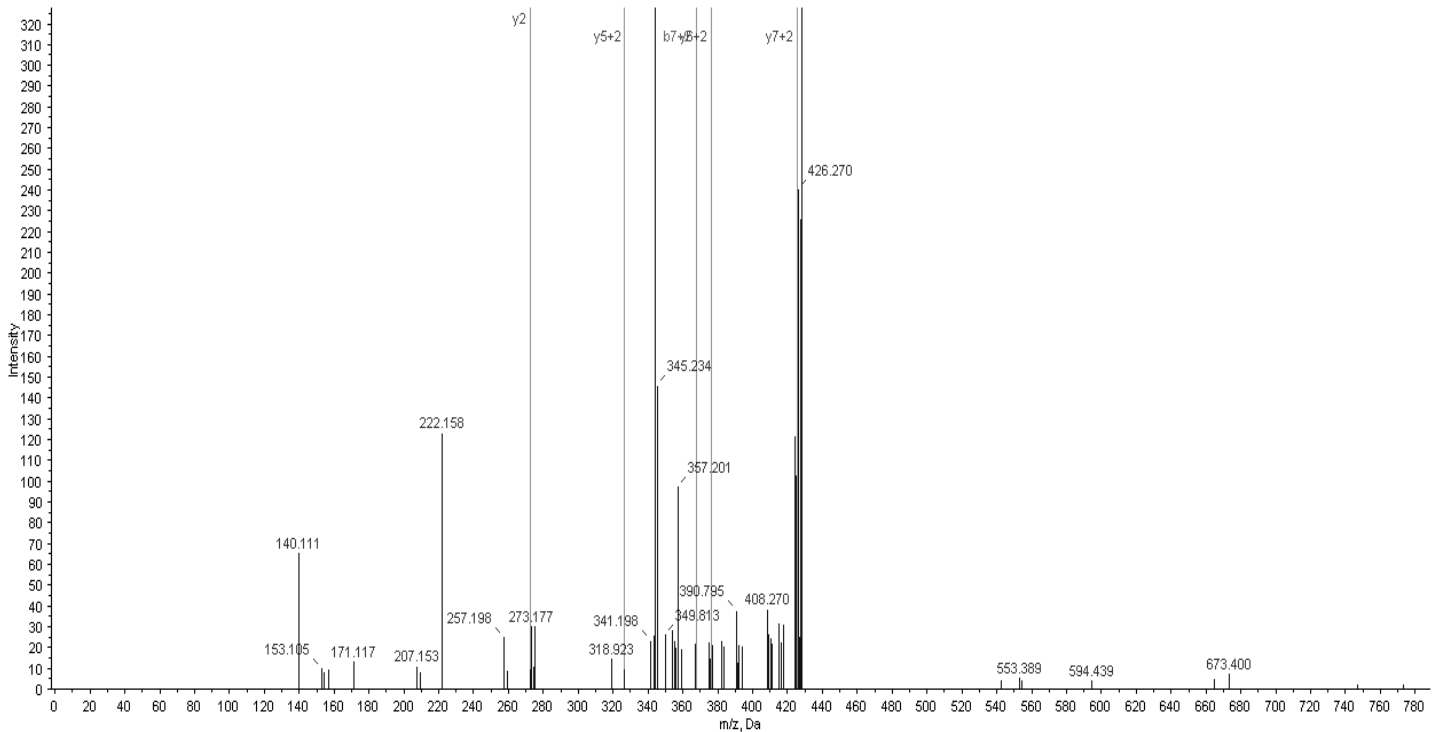
Netphos V2.0 score: N/A due to length of the protein



Peptide PPL: HVGKVVL<sup>S</sup>VPR

Netphos Bac score: N/A due to length of the protein

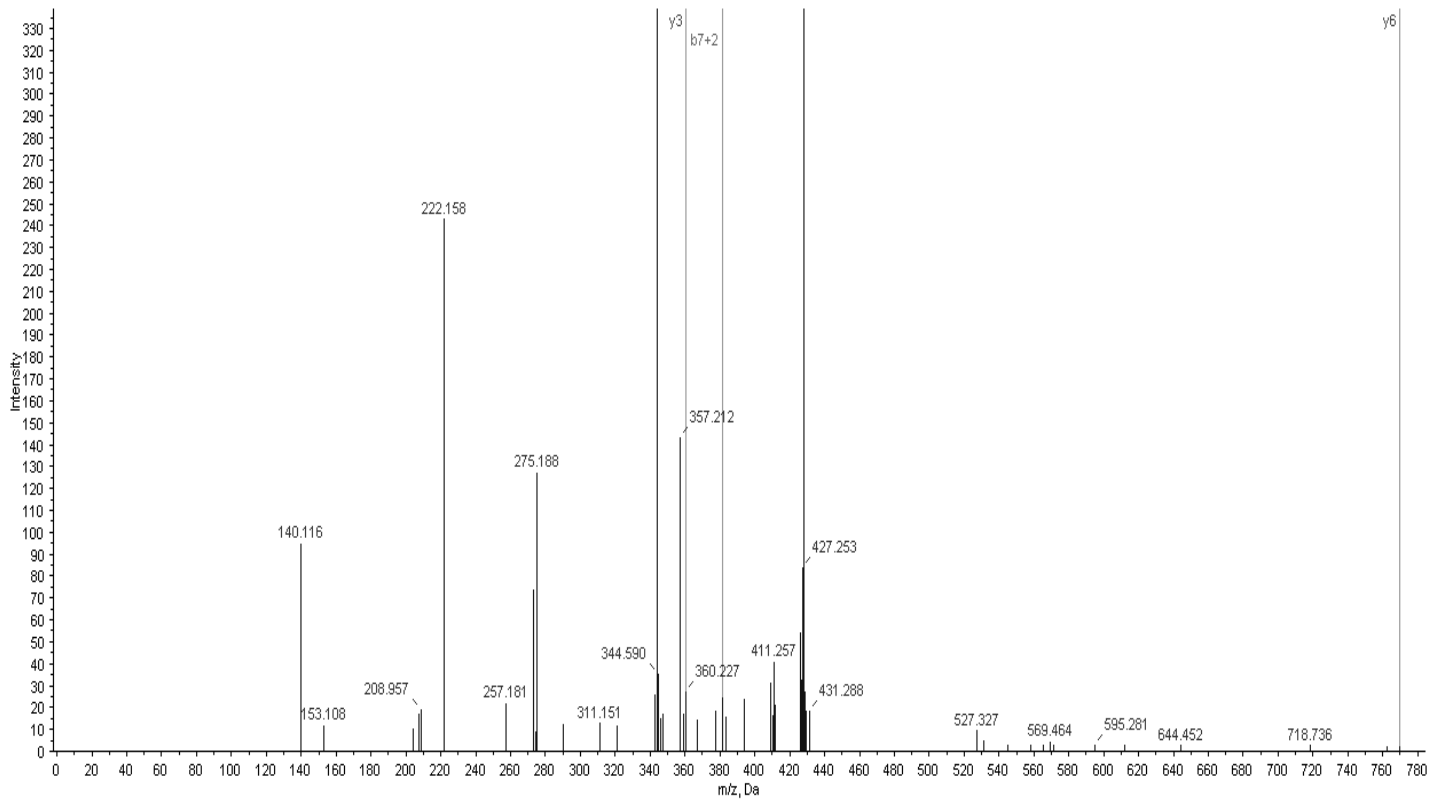
Netphos V2.0 score: N/A due to length of the protein



Peptide PPL: **S**GVALRPRANR

Netphos Bac score: N/A due to length of the protein

Netphos V2.0 score: N/A due to length of the protein

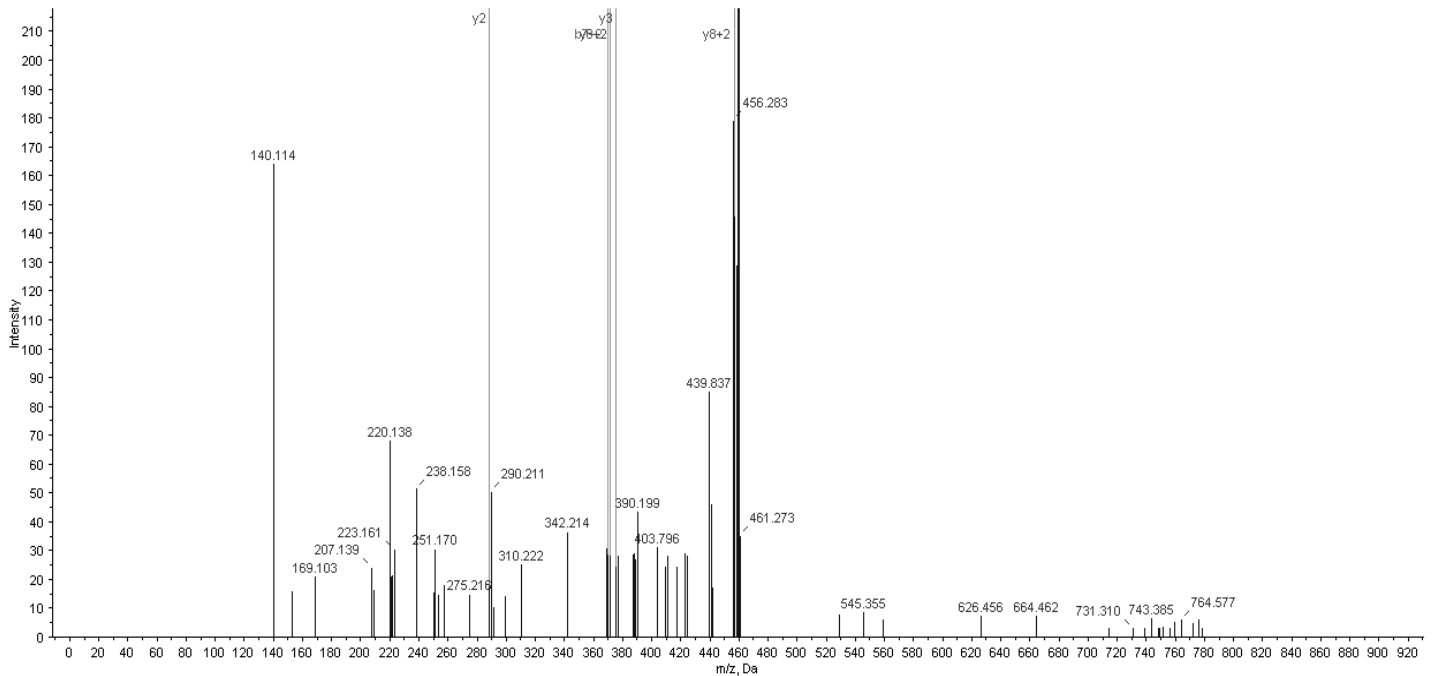


Name: **SACE\_2947**

Peptides PPL: GLNAT**S**IR

Netphos Bac score: 0.344

Netphos V2.0 score: 0.030

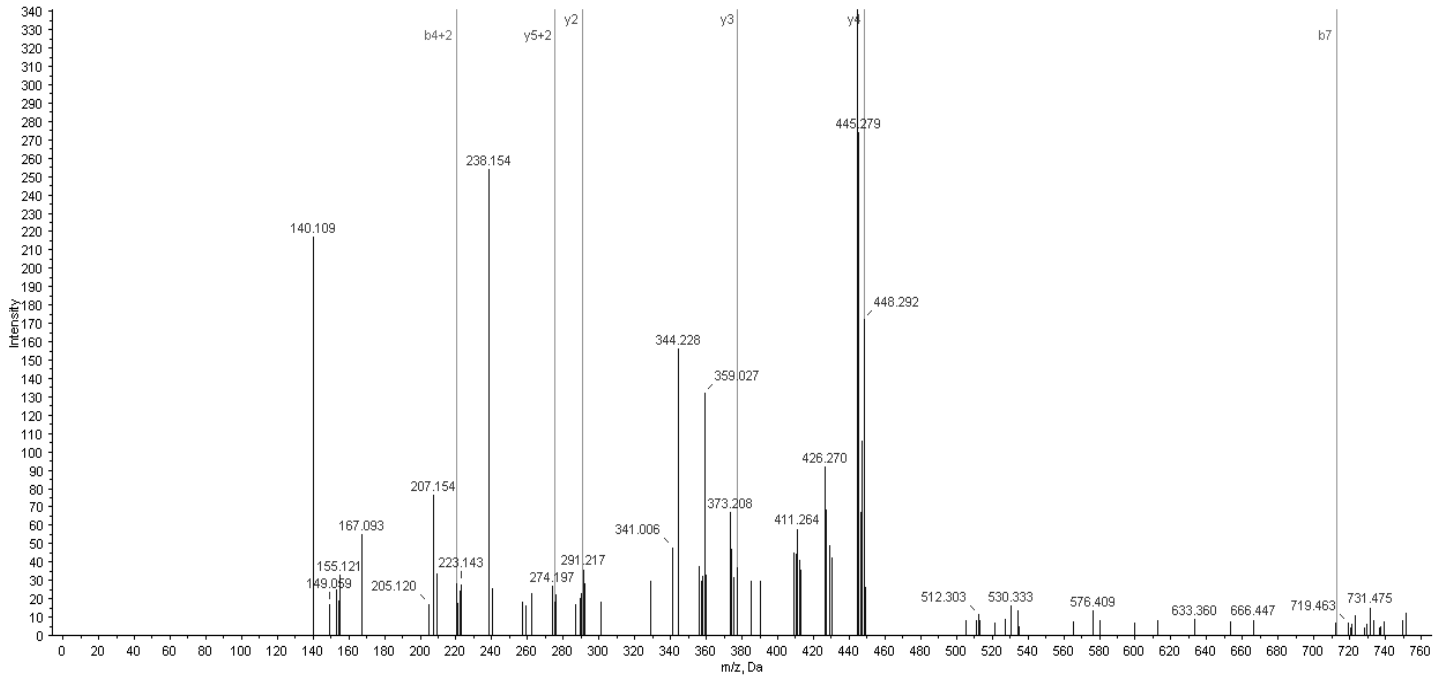


Name: SACE\_4140

Peptides PPL: ASVTASDR

Netphos Bac score: N/A due to length of the protein

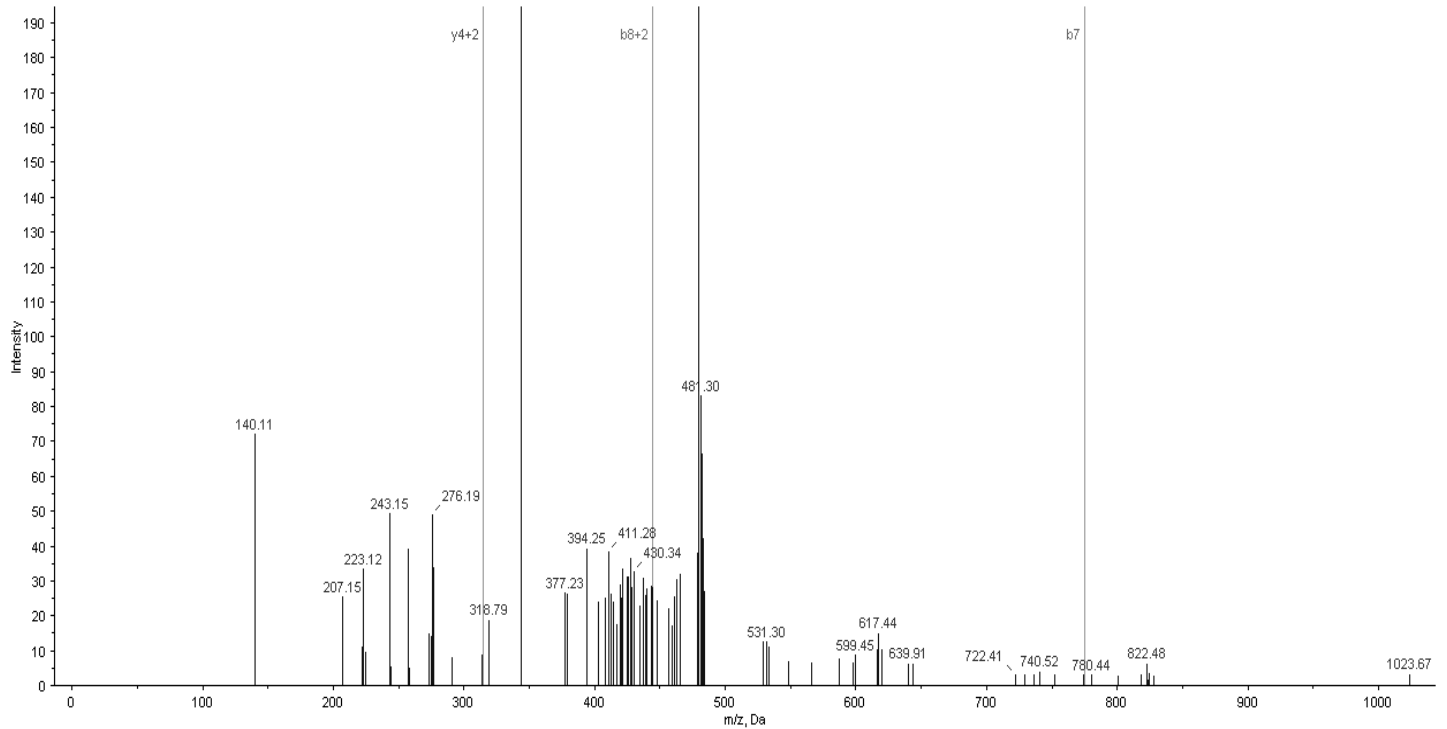
Netphos V2.0 score: N/A due to length of the protein



Peptide PPL: DSSWAVQLEALSESRR

Netphos Bac score: N/A due to length of the protein

Netphos V2.0 score: N/A due to length of the protein

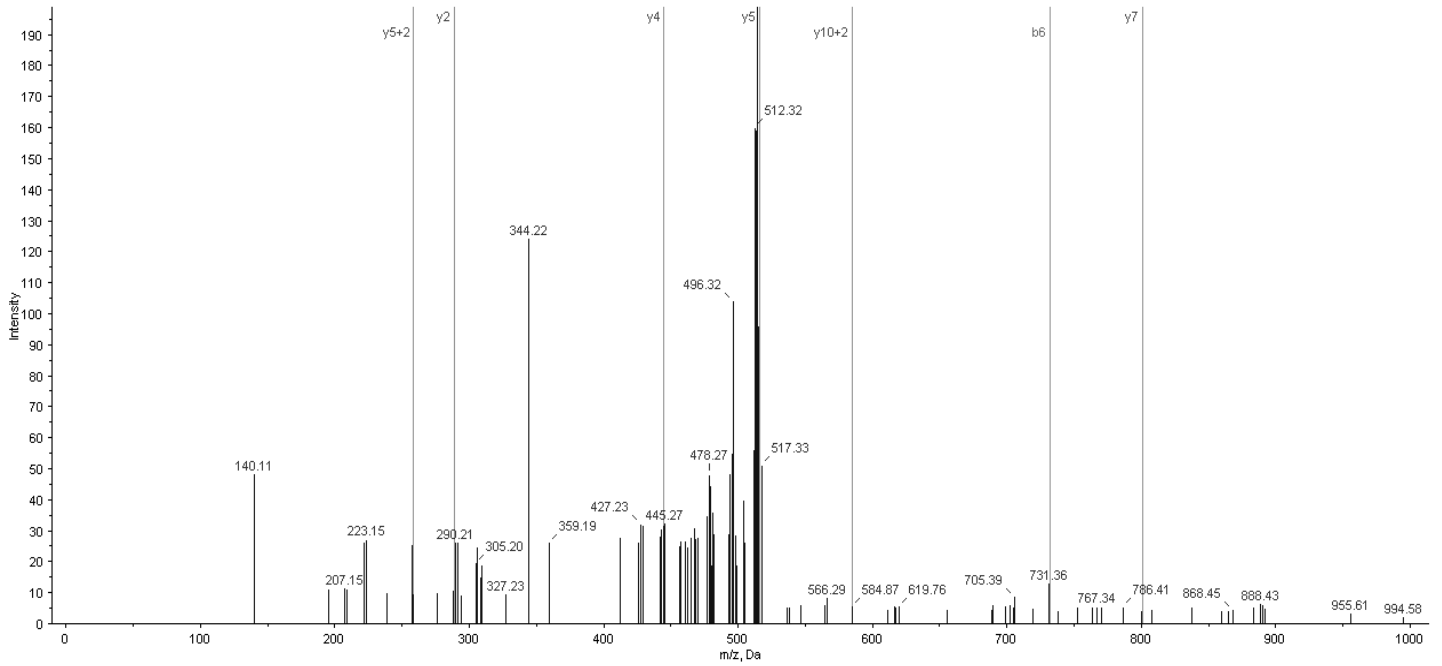


Name: SACE\_4355

Peptide PPL: STSTHHFRVLREAGVIR

Netphos Bac score: 0.677

Netphos V2.0 score: 0.916

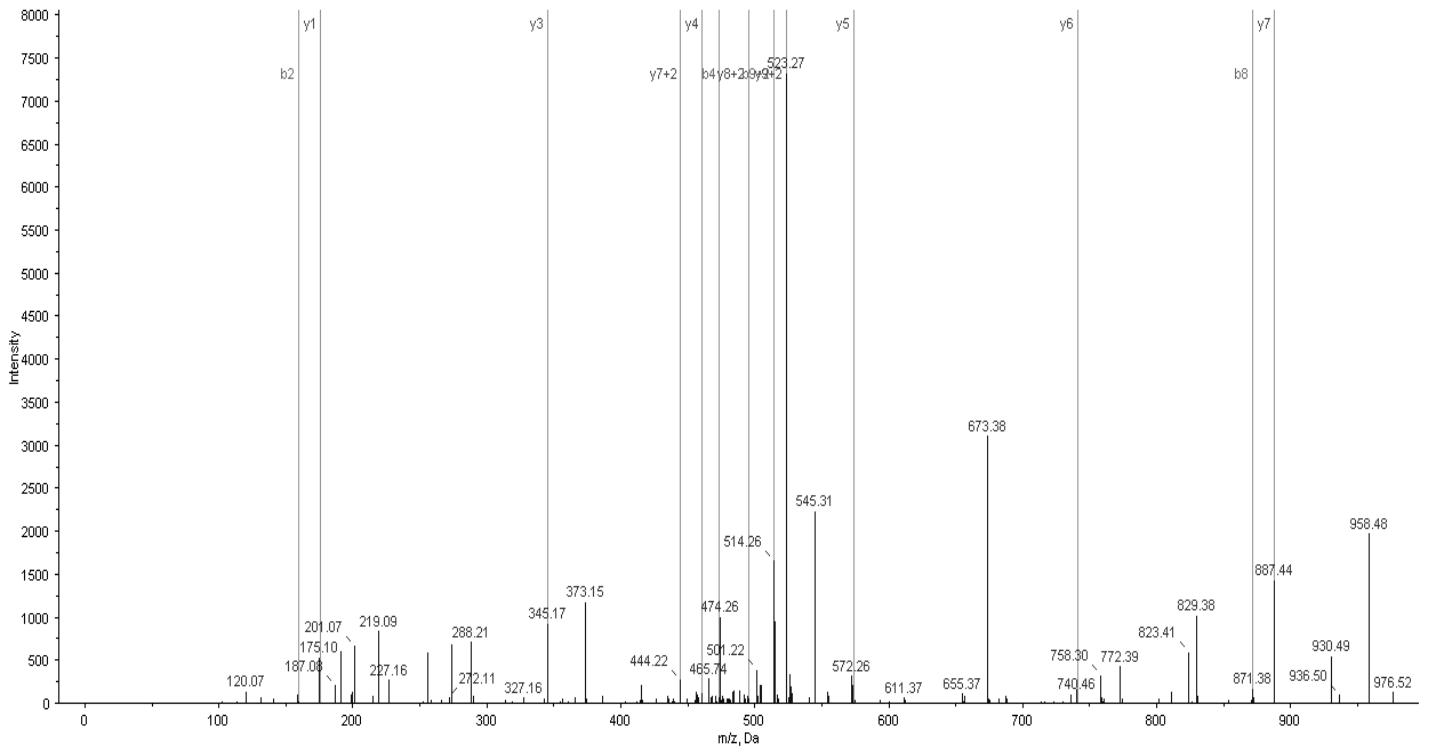


Name: SACE\_4561

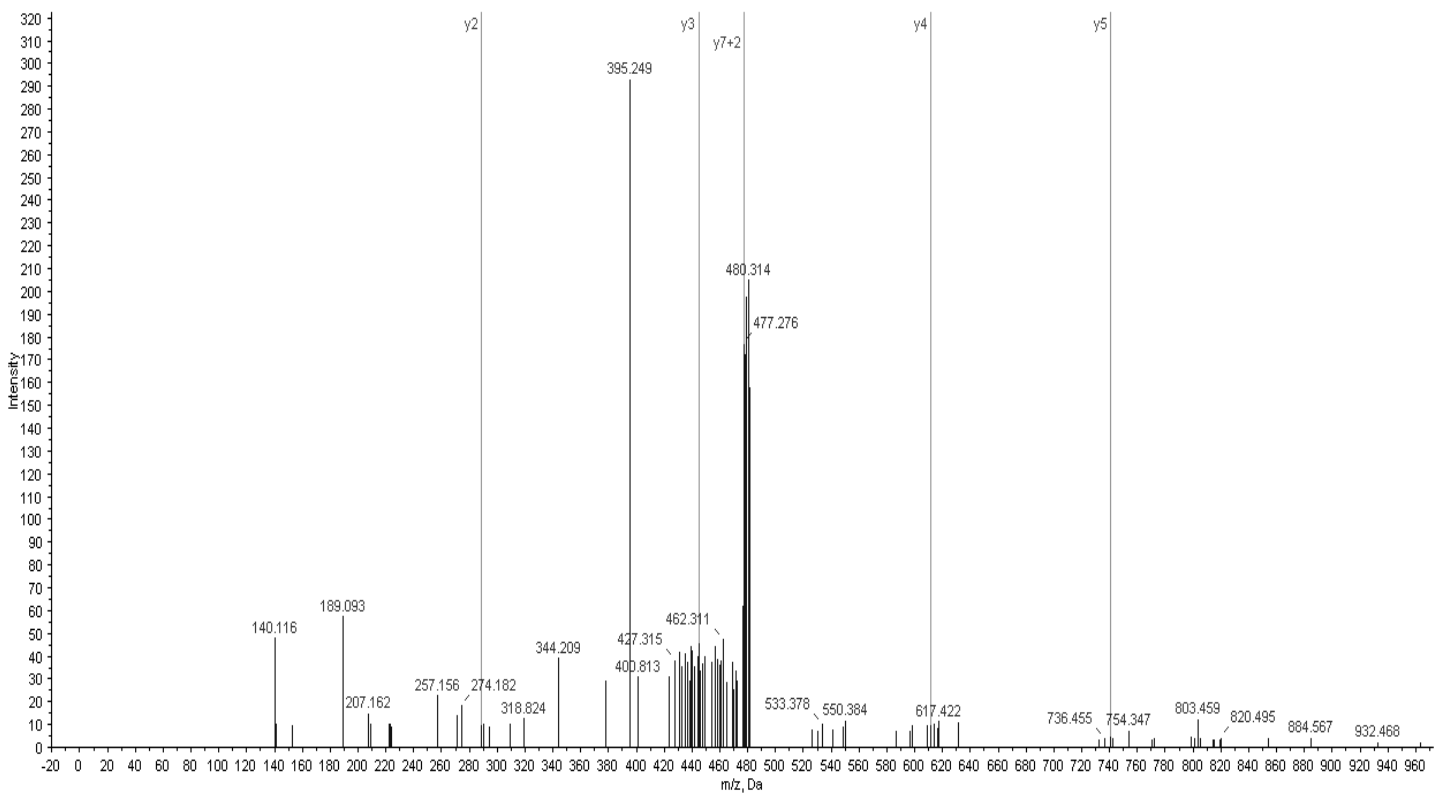
Peptide PPL: GTFSIDIGR

Netphos Bac score: 0.670

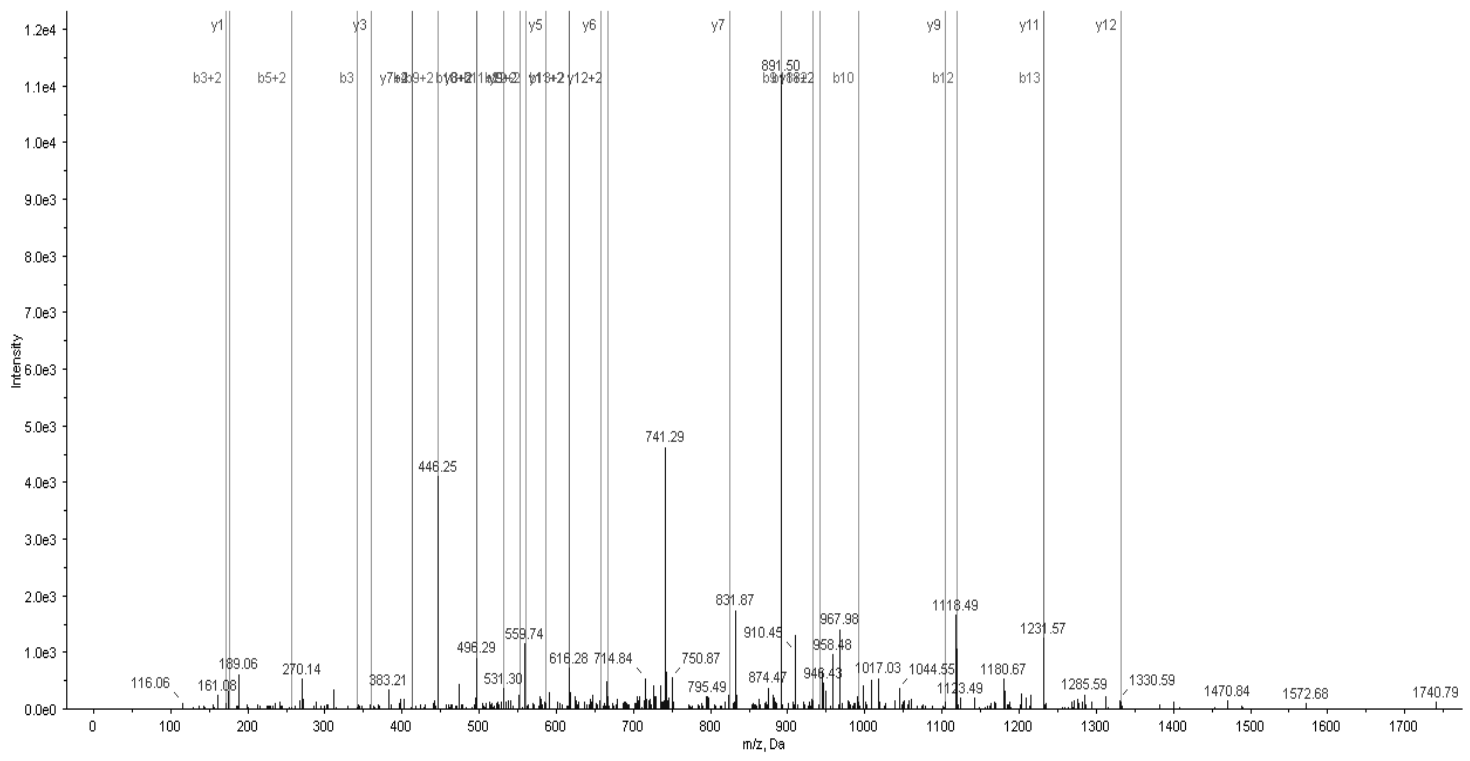
Netphos V2.0 score: 0.200



Peptide PPL: GRESRIR  
 Netphos Bac score: 0.724  
 Netphos V2.0 score: 0.994



Peptide PPL: IAVVGGSVAGLSSAILLAR  
 Netphos Bac score: (S@16) 0.346 and (S@17) 0.662  
 Netphos V2.0 score: (S@16) 0.009 and (S@17) 0.005



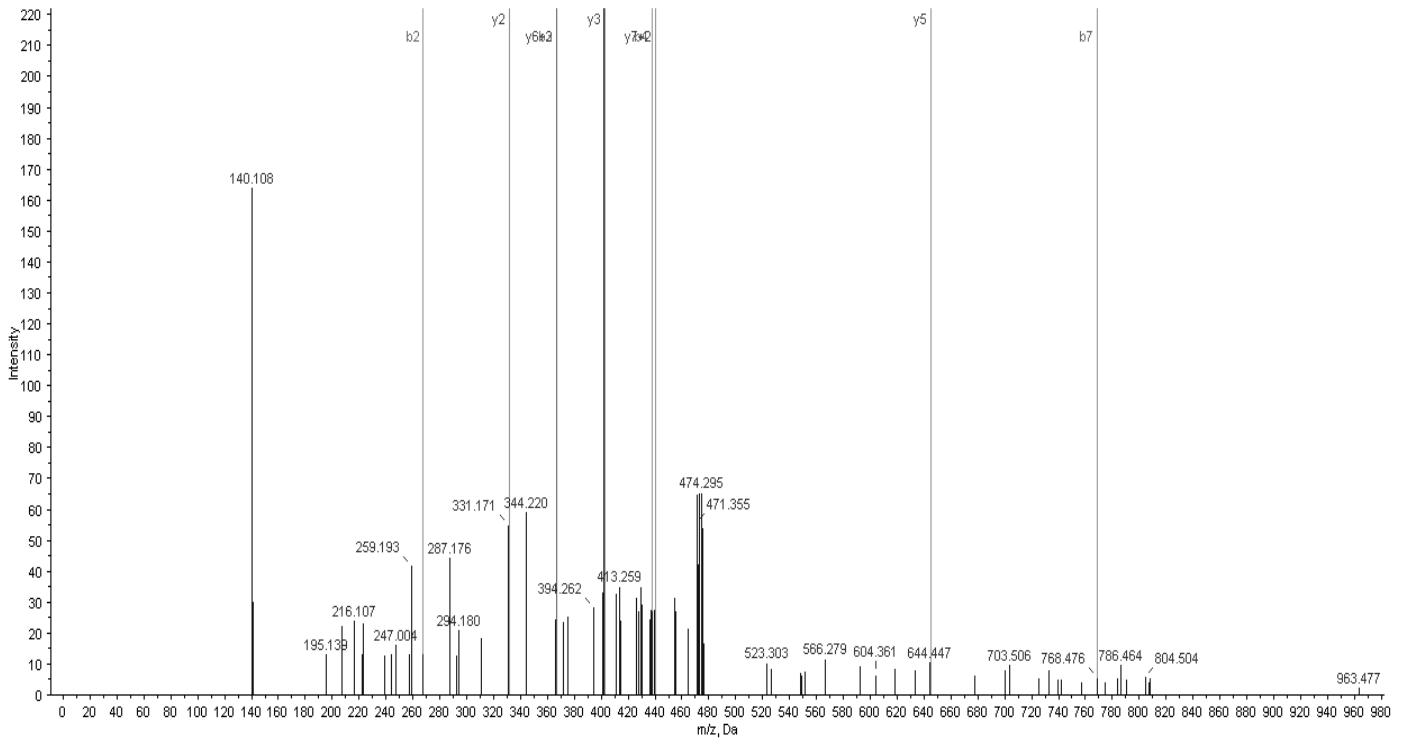


Name: SACE\_4761

Peptide PPL: VS VAPFSELARR

Netphos Bac score: 0.277

Netphos V2.0 score: 0.002

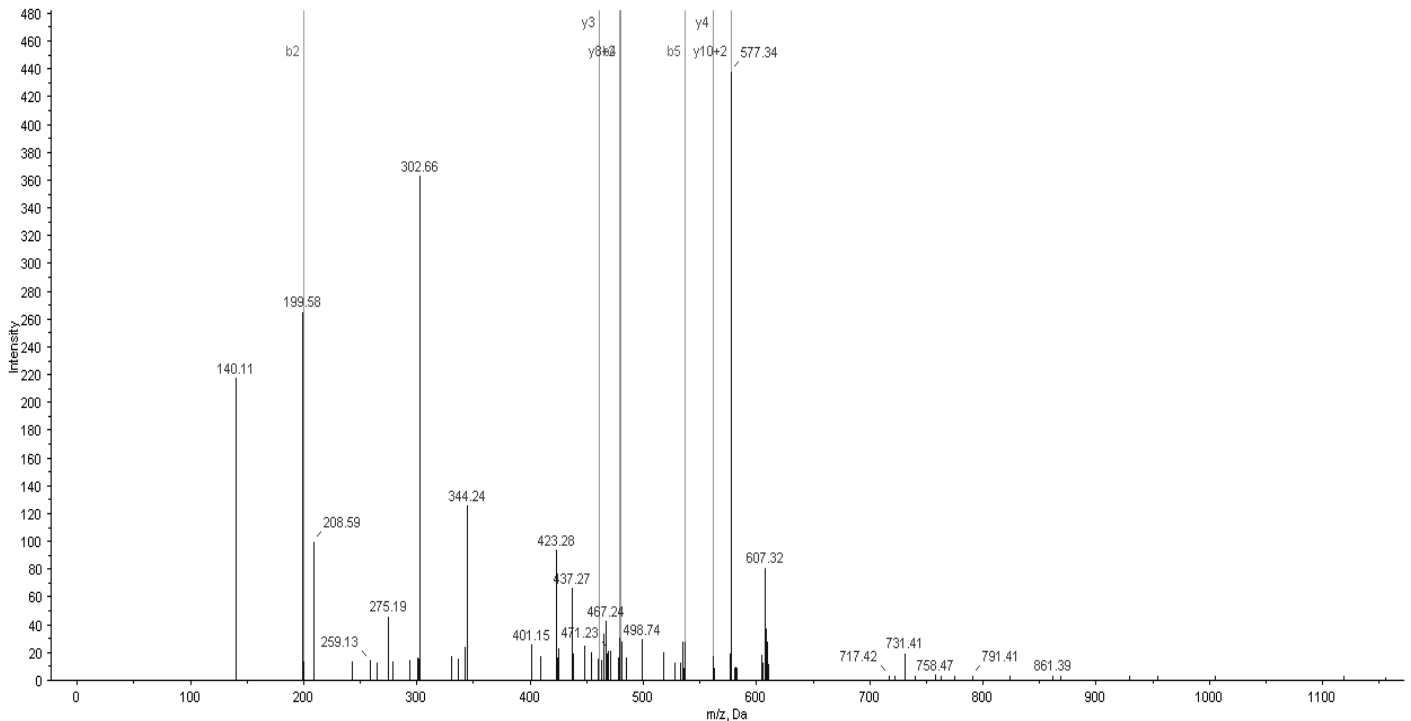


Name: SACE\_5311

Peptide PPL: TPV TGGTVWR

Netphos Bac score: 0.383

Netphos V2.0 score: 0.083

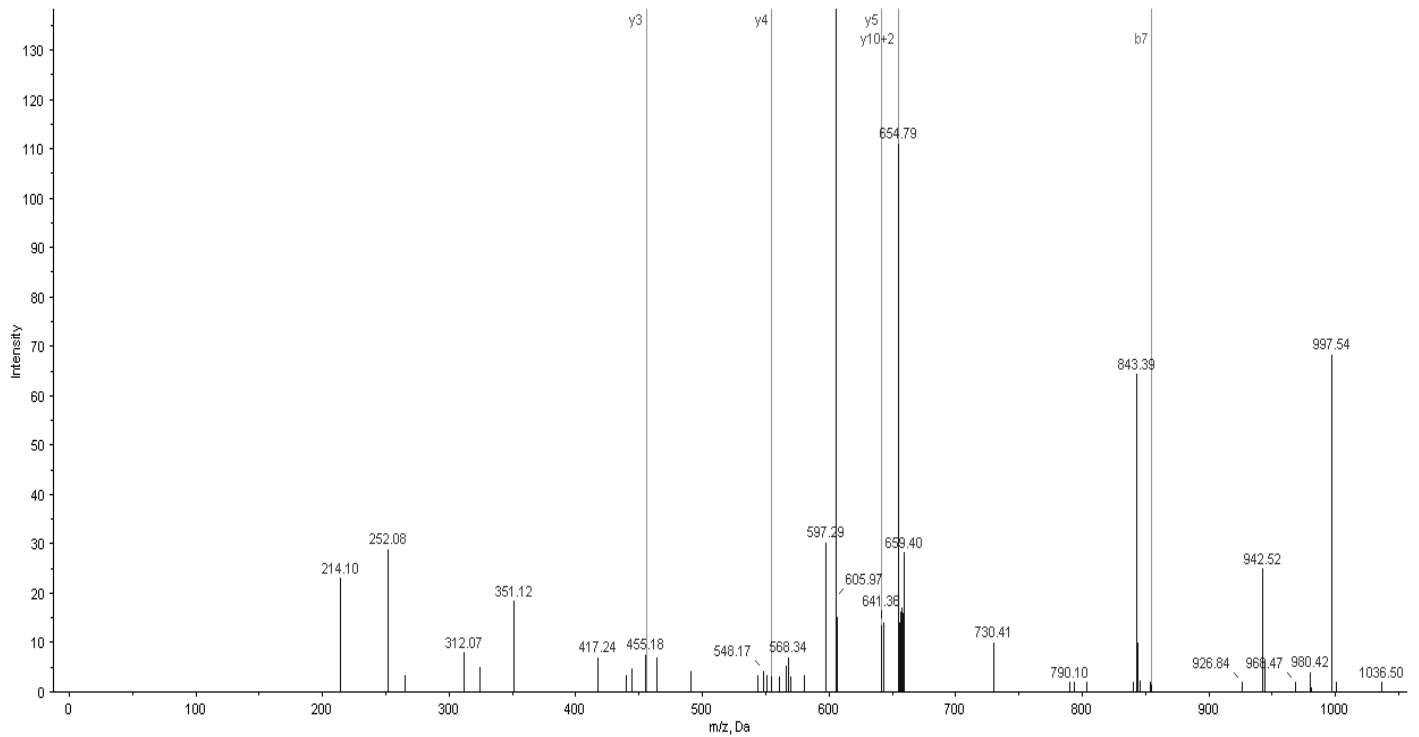


Name: SACE\_5463

Peptide PPL: ELSEESVLSR

Netphos Bac score: N/A due to length of the protein

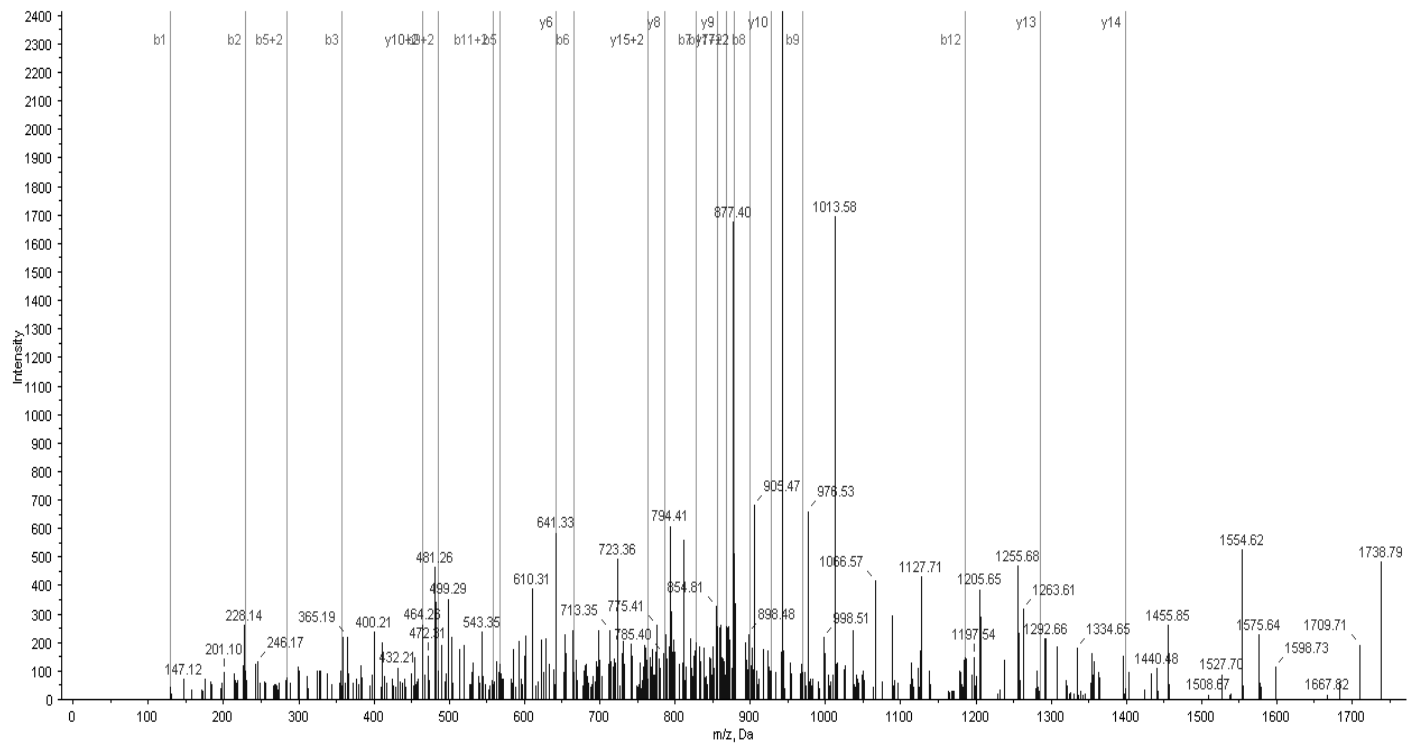
Netphos V2.0 score: N/A due to length of the protein



Peptide PPL: QVELPPYAASGAVGSGK

Netphos Bac score: N/A due to length of the protein

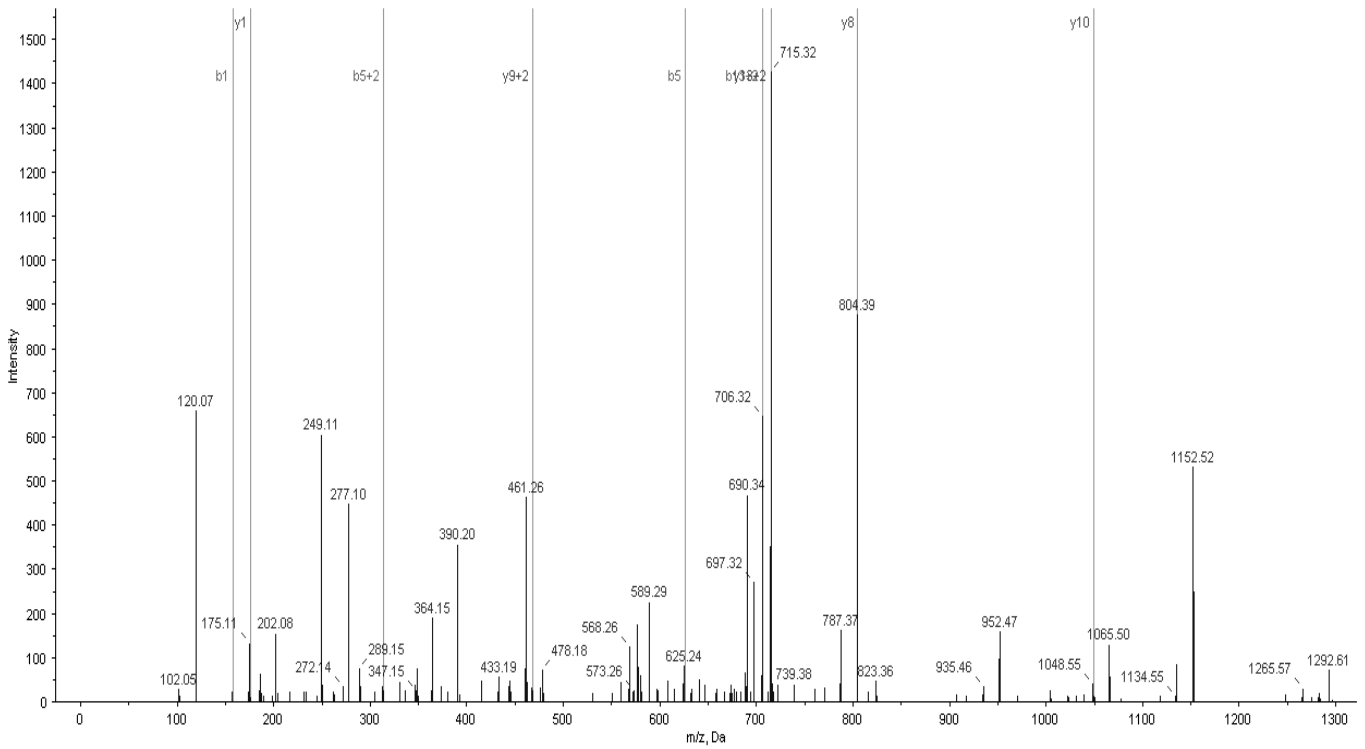
Netphos V2.0 score: N/A due to length of the protein



Peptide PPL: **RS**GDEHPGAPVAR

Netphos Bac score: N/A due to length of the protein

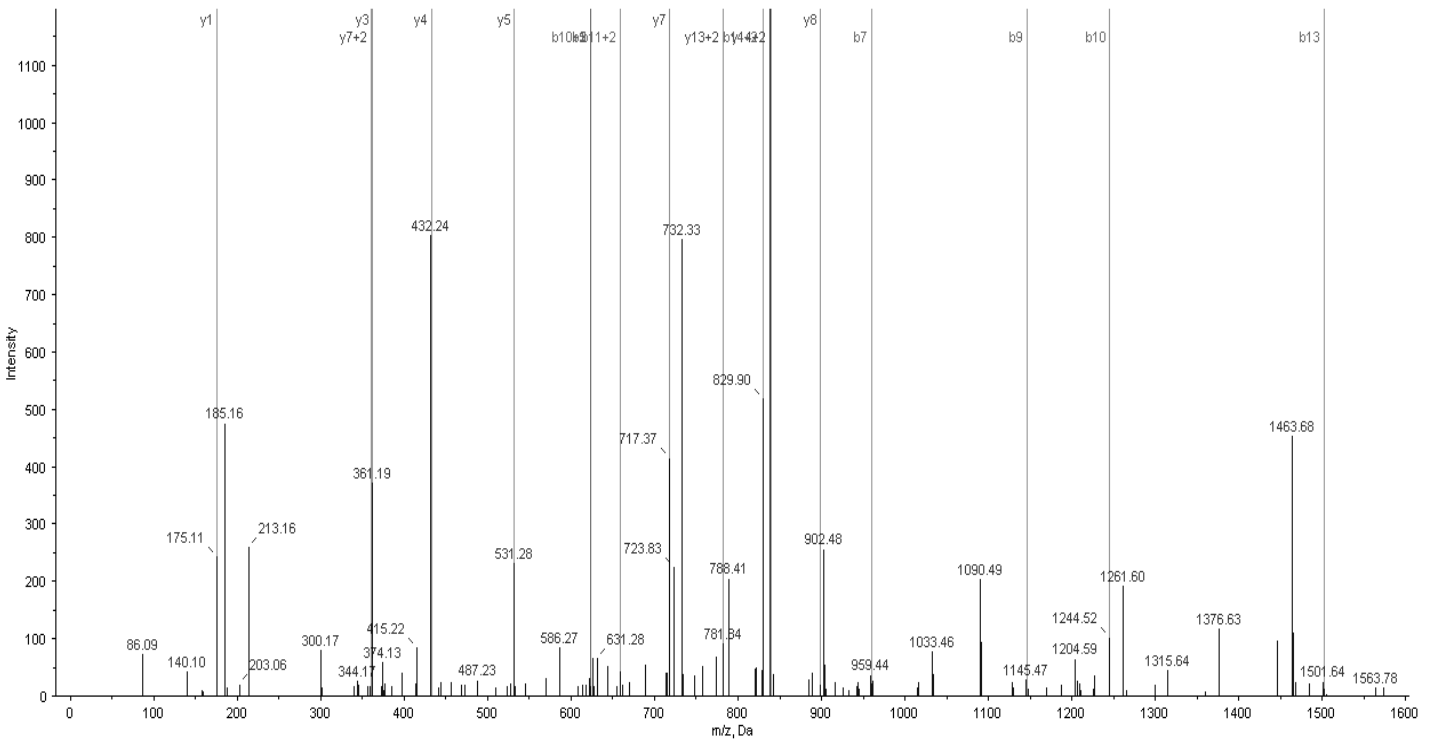
Netphos V2.0 score: N/A due to length of the protein



Peptide PPL: LRNSARTEGVADAR (detected in 1-2)

Netphos Bac score: N/A due to length of the protein

Netphos V2.0 score: N/A due to length of the protein

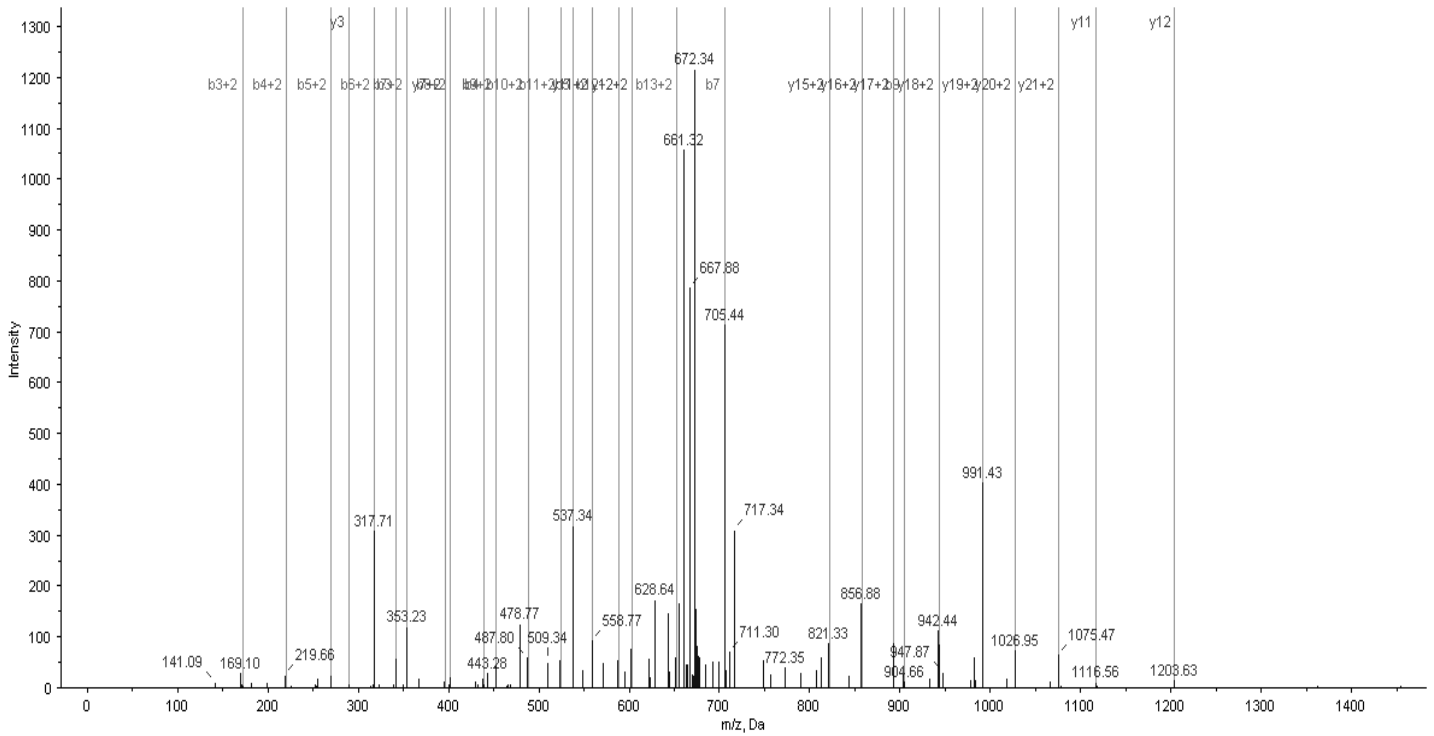


Name: SACE\_5830

Peptide PPL: RLAPVPAPTAAEQTSPGGDHHVQAAK

Netphos Bac score: 0.103

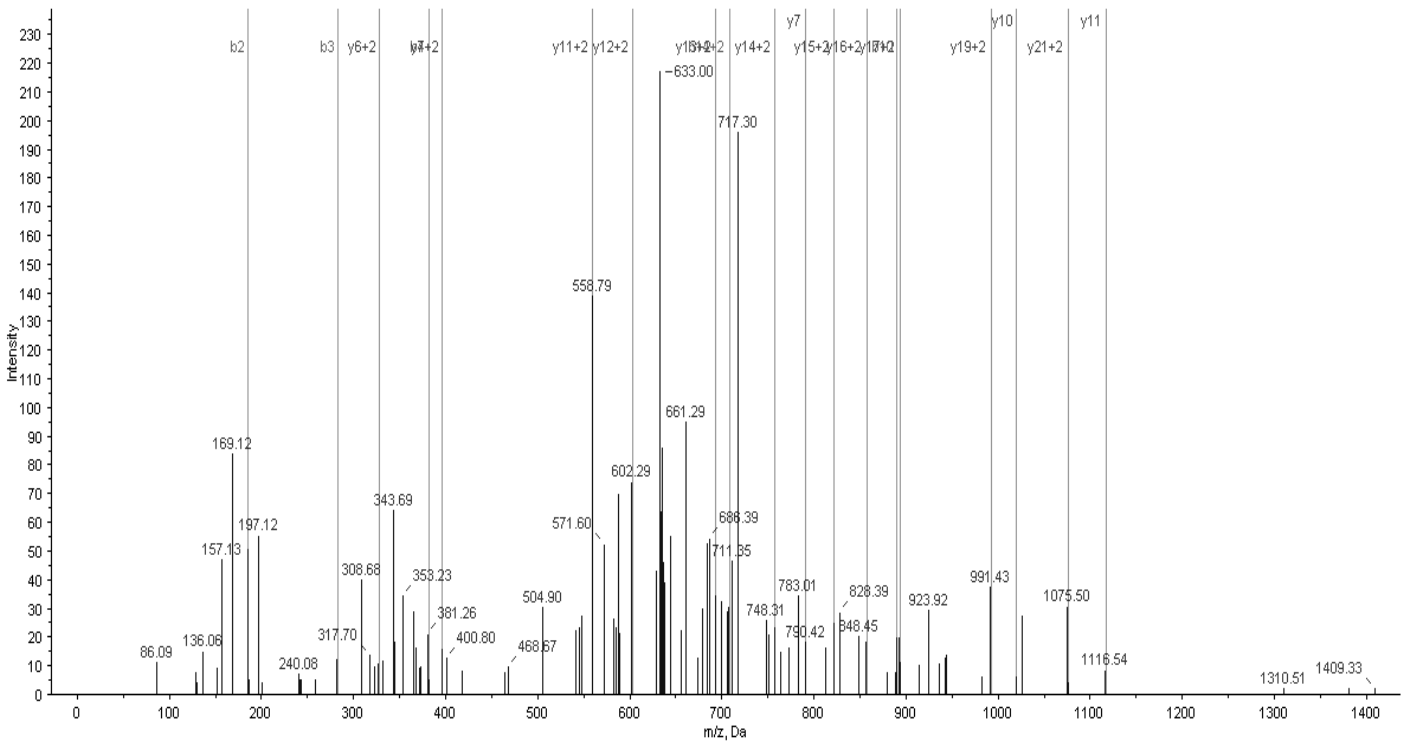
Netphos V2.0 score: 0.719



Peptide: LAPVPAPTAAEQTSPGGDHHVQAAK

Netphos Bac score: 0.103

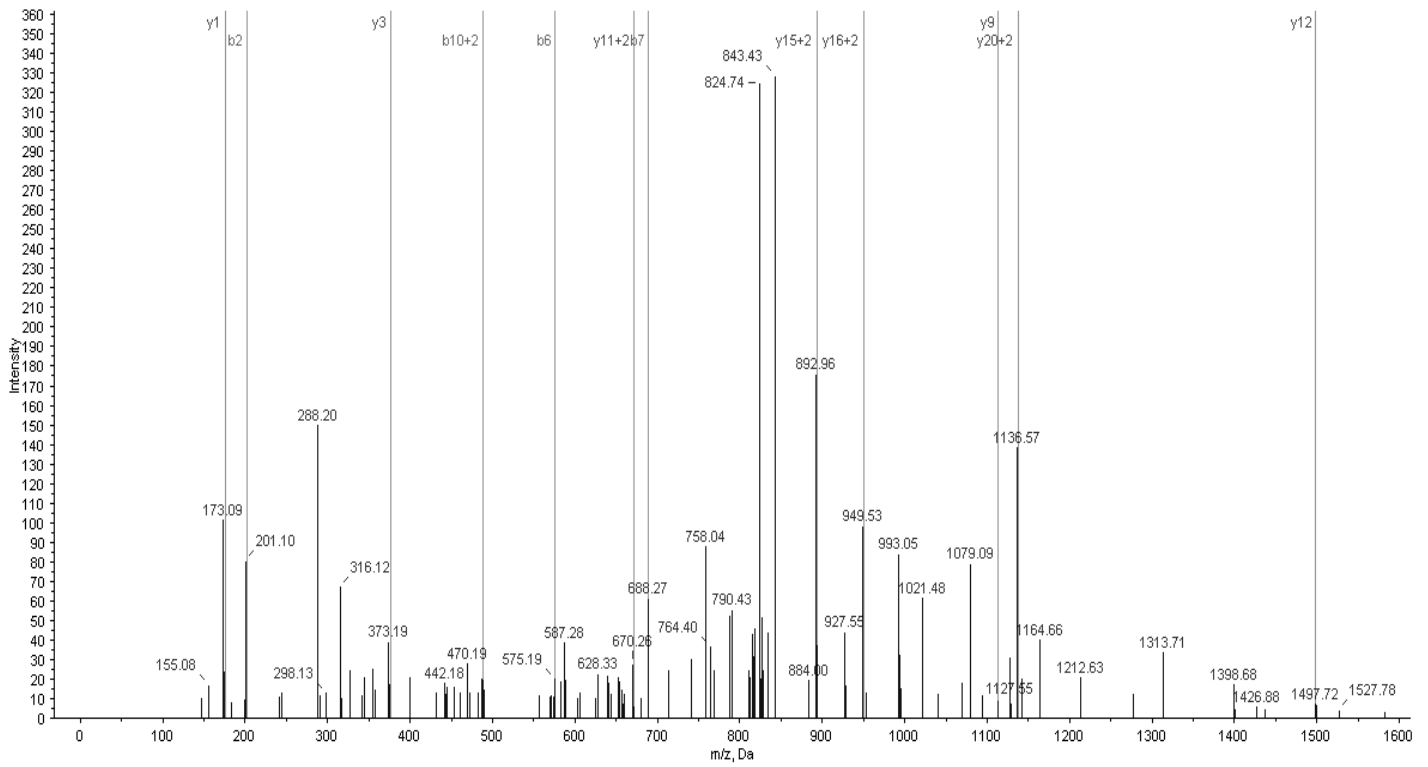
Netphos V2.0 score: 0.719



Peptide: AEADGMLSEARTKSEQLLSDAR

Netphos Bac score: 0.293

Netphos V2.0 score: 0.639

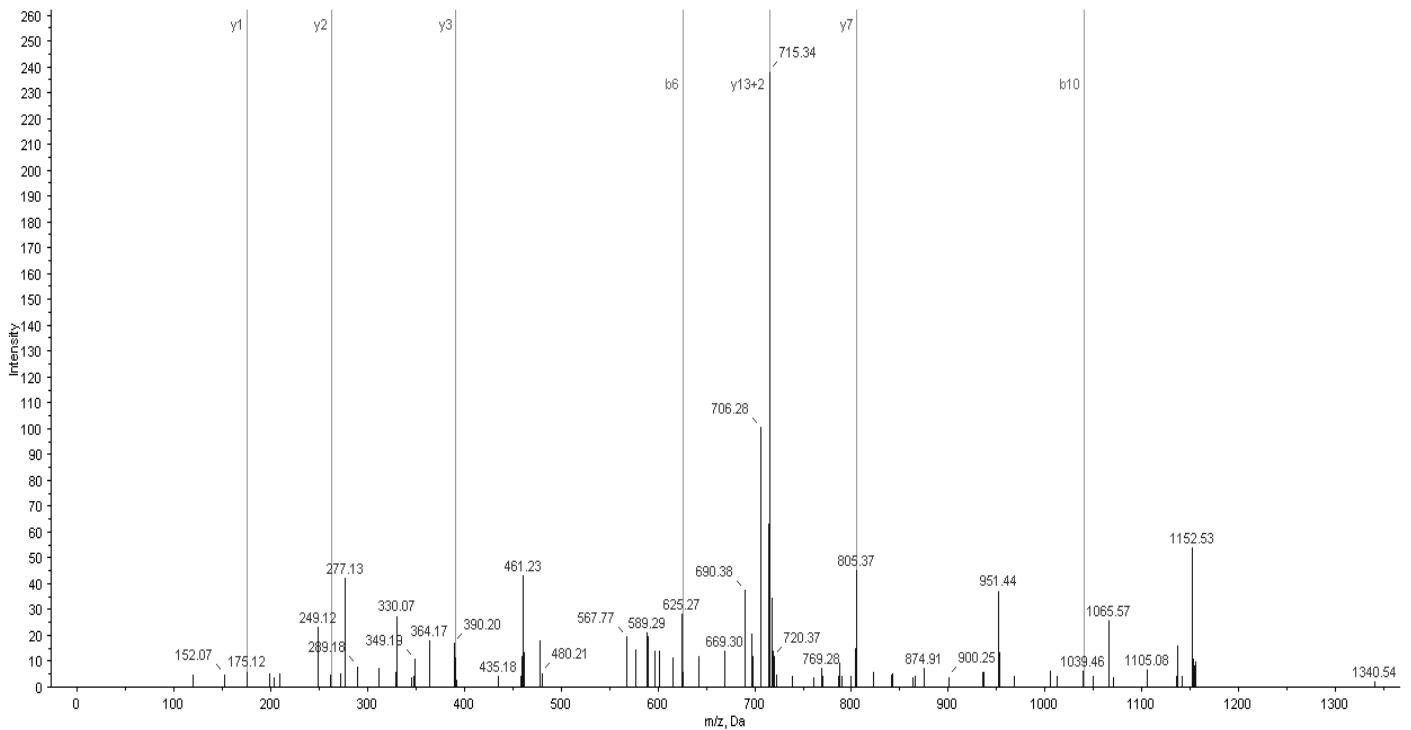


Name: SACE\_6340

Peptide PPL: VSASTVDISVKSR

Netphos Bac score: 0.391

Netphos V2.0 score: 0.993

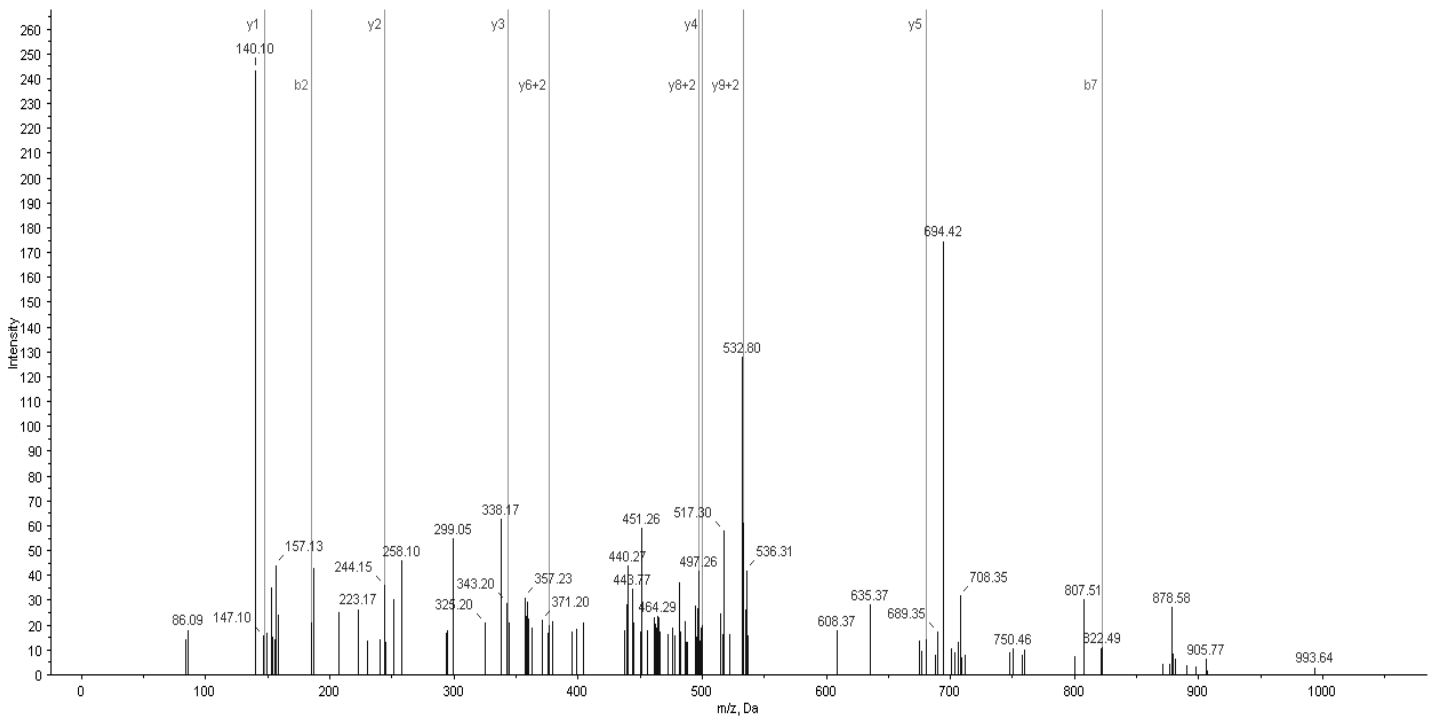


Name: SACE\_7023

Peptide PPL: AIEA**T**RVPK

Netphos Bac score: 0.309

Netphos V2.0 score: 0.273

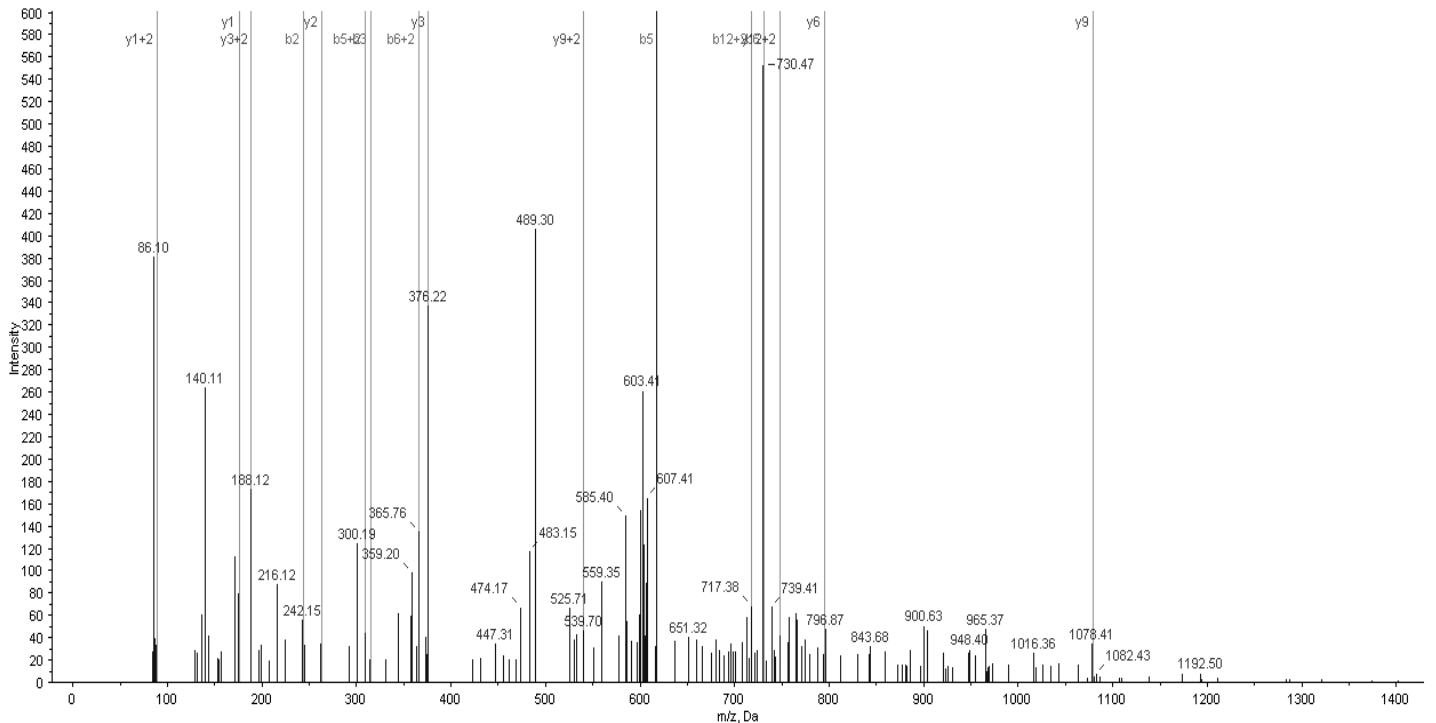


Name: SACE\_4954

Peptide PPL: EIARFLGRAA**ST**ISR

Netphos Bac score: 0.374 (S) and 0.458 (T)

Netphos V2.0 score: 0.854 (S) and 0.821 (T)

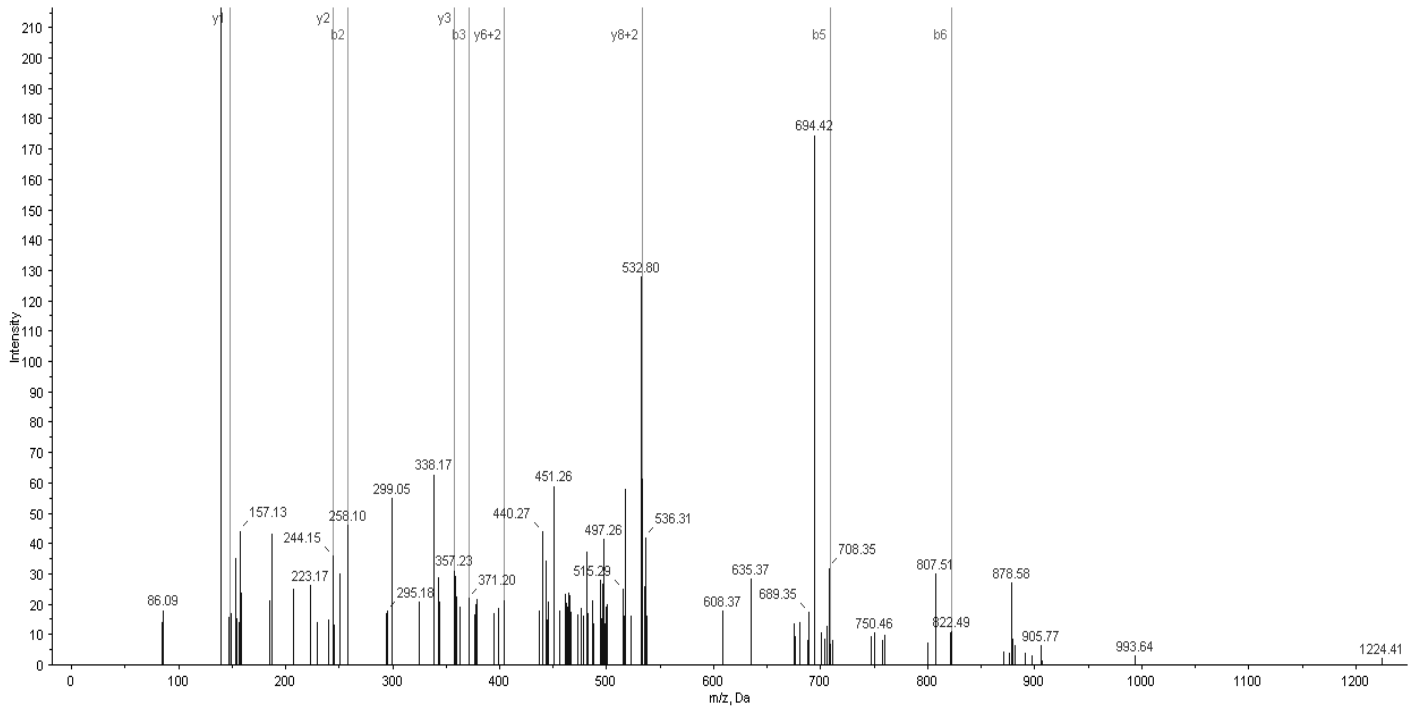


Name: SACE\_3651

Peptide PPL: EKLRL**T**LPK

Netphos Bac score: 0.031

Netphos V2.0 score: 0.403

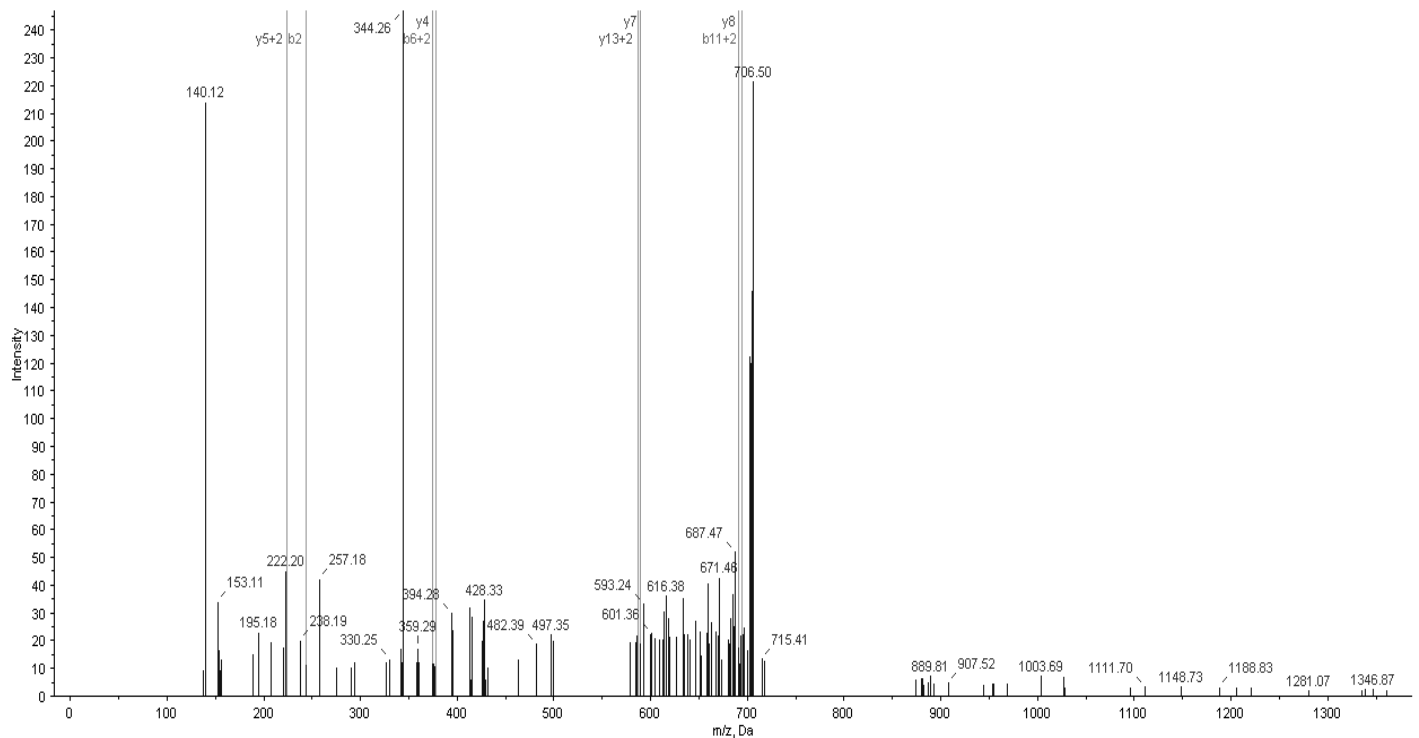


Name: SACE\_4291

Peptide PPL: EL**S**DLILLHRPPGVVGLLTGSAGIGK

Netphos Bac score: 0.305

Netphos V2.0 score: 0.990

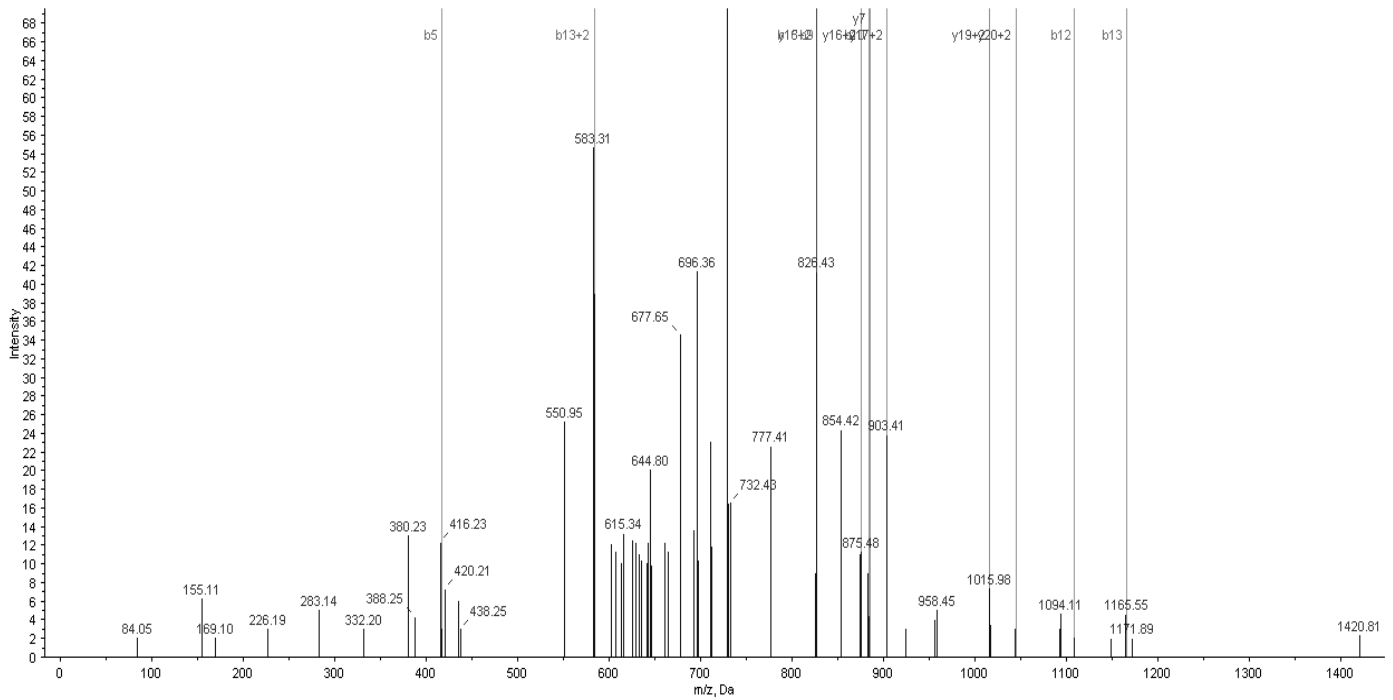


Name: SACE\_6494

Peptide PPL: GGPGFQQPGPQPPAGYQGHGHNPHSGR

Netphos Bac score: 0.515

Netphos V2.0 score: 0.940

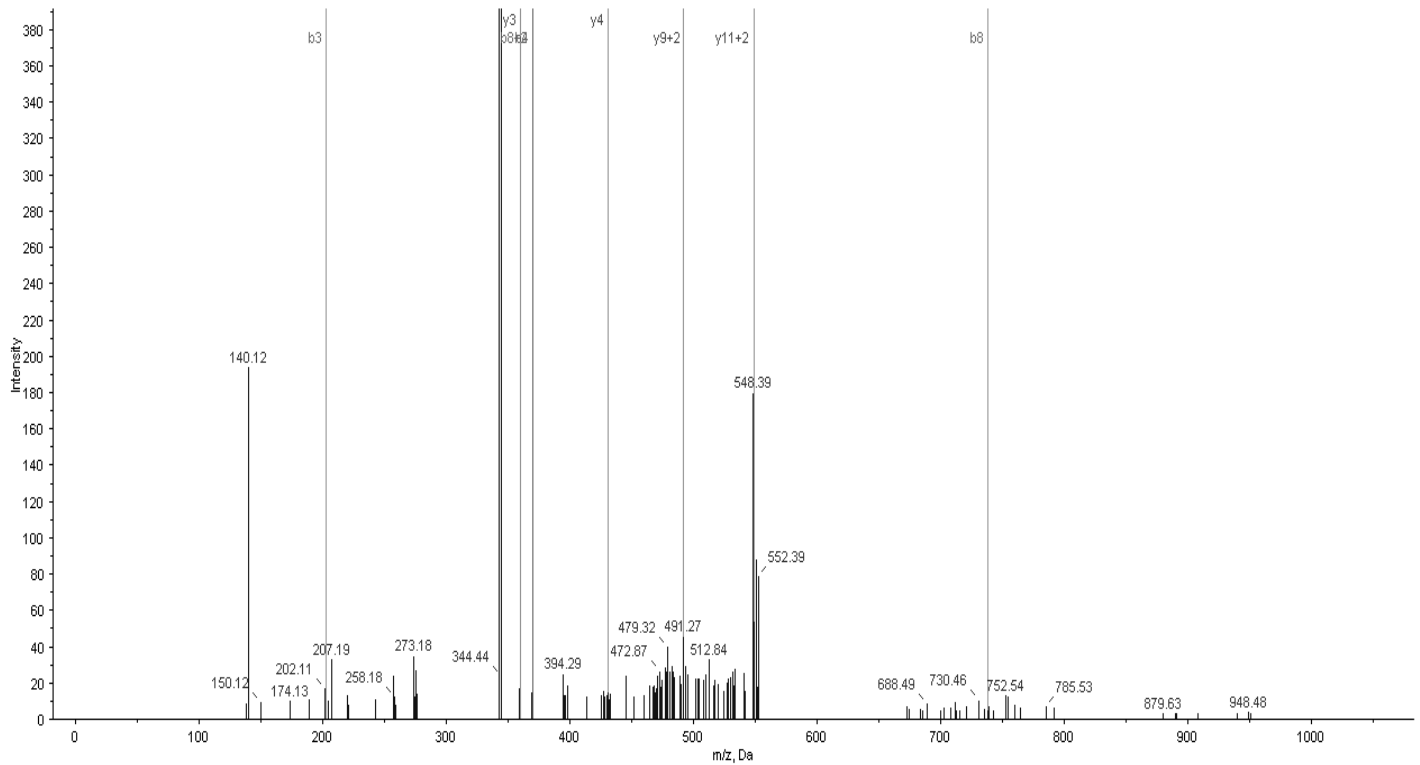


Name: SACE\_2595

Peptide PPL: GGSSALLALAR

Netphos Bac score: N/A due to length of the protein

Netphos V2.0 score: N/A due to length of the protein



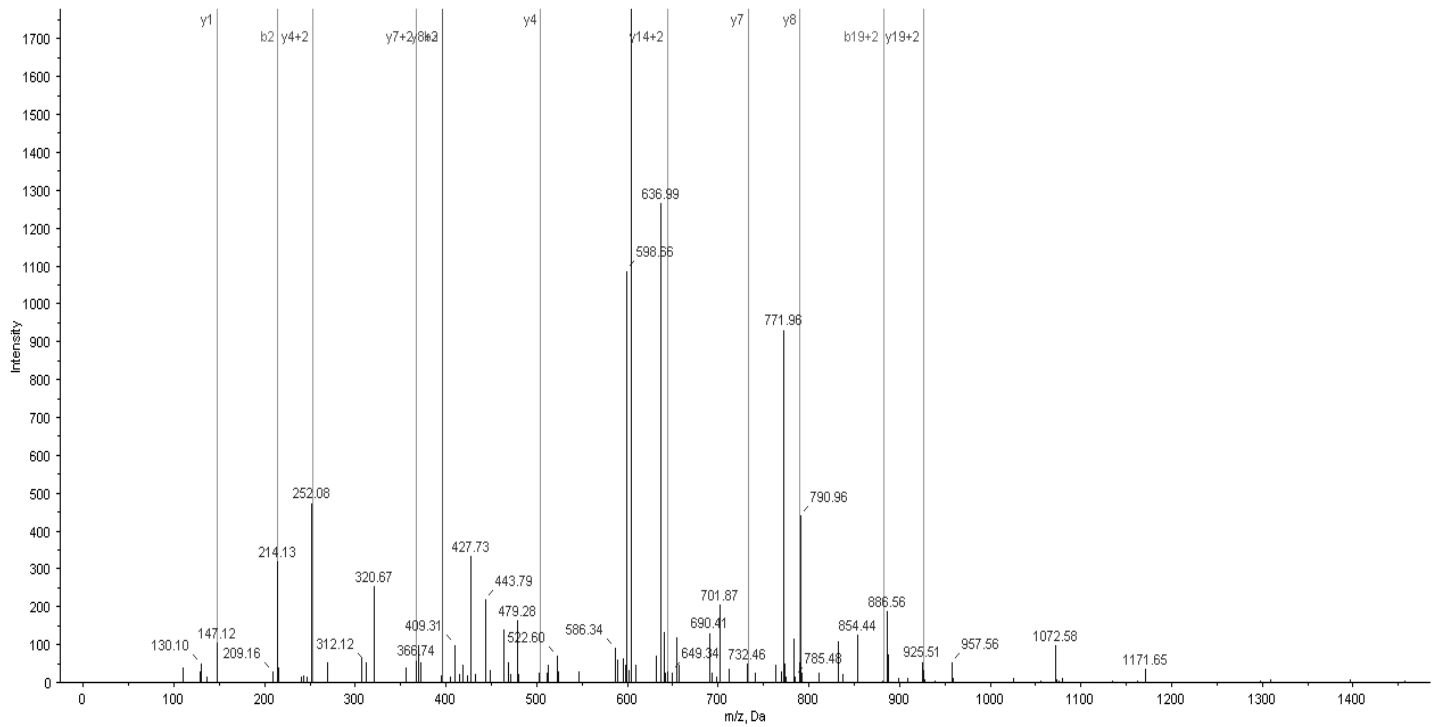


**Name: SACE\_5209**

Peptide PPL: GR**T**VGATVVGAAGSAAKVEK

Netphos Bac score: 0.810

Netphos V2.0 score: 0.509

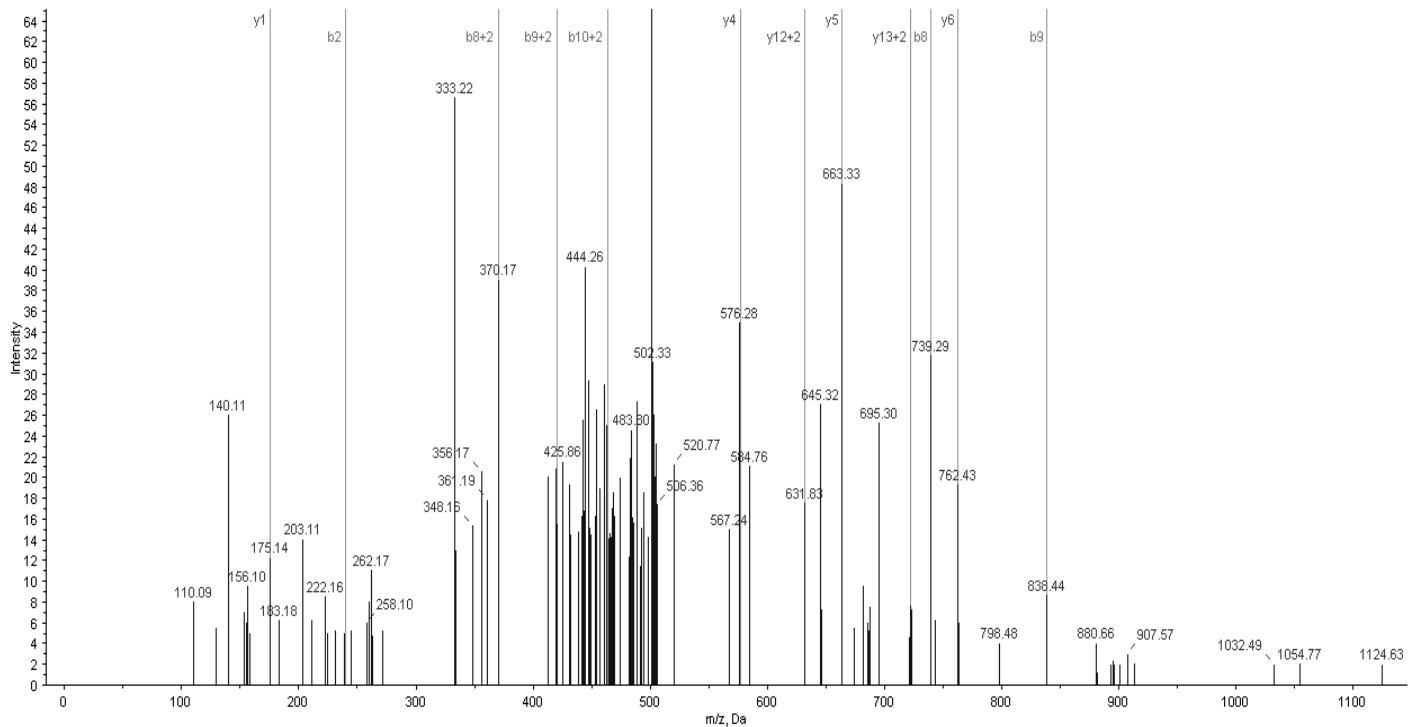


**Name: SACE\_6451**

Peptide PPL: GT**D**SIGGAVSTWNR

Netphos Bac score: 0.146

Netphos V2.0 score: 0.046

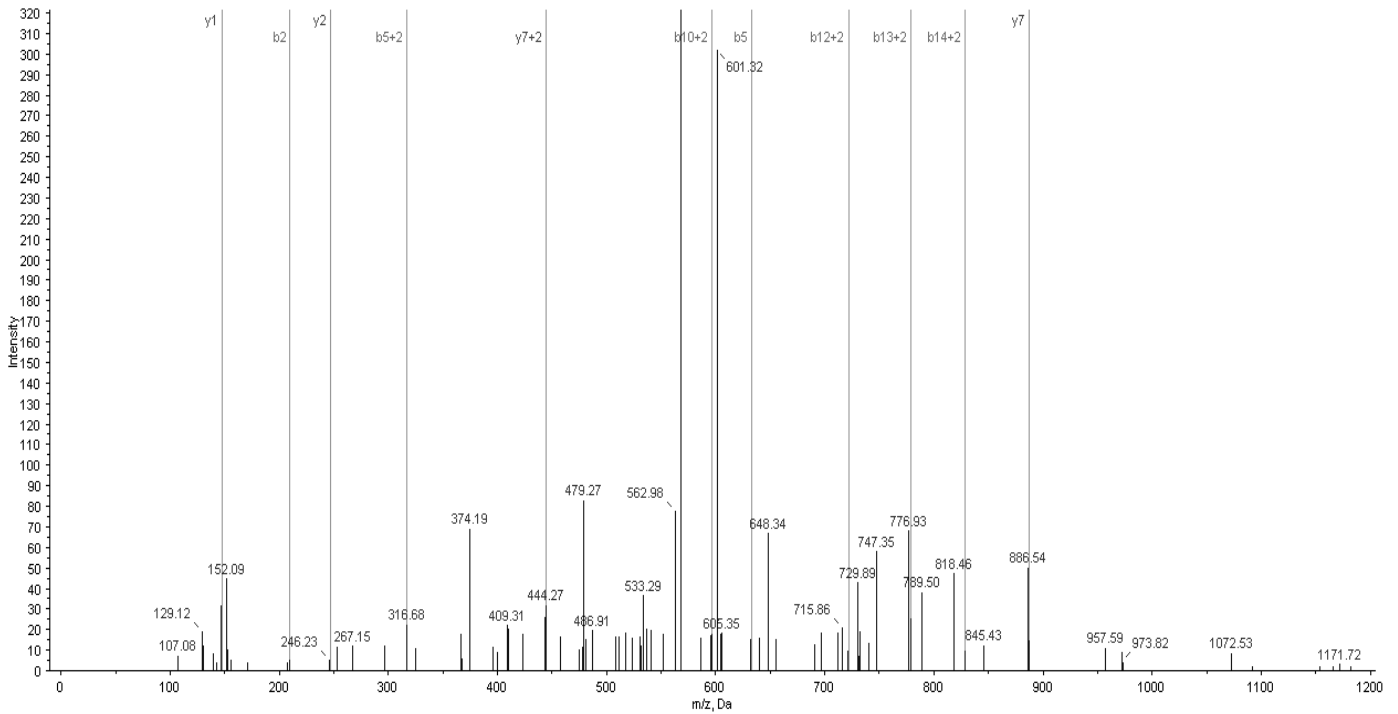


Name: SACE\_3279

Peptide PPL: HA**T**LEAGRKFYSDVK

Netphos Bac score: 0.470

Netphos V2.0 score: 0.340

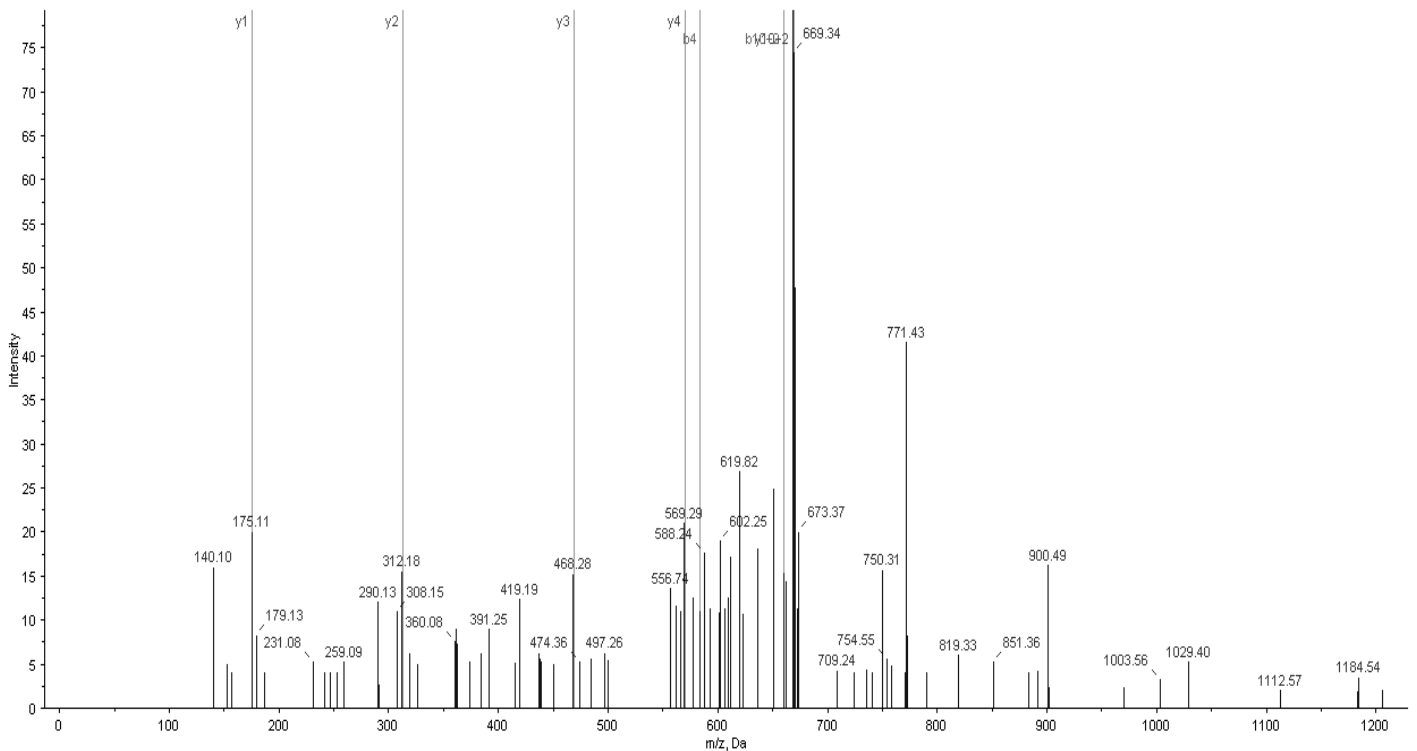


Name: SACE\_6101

Peptide PPL: KM**S**RANTRHR

Netphos Bac score: 0.296

Netphos V2.0 score: 0.996

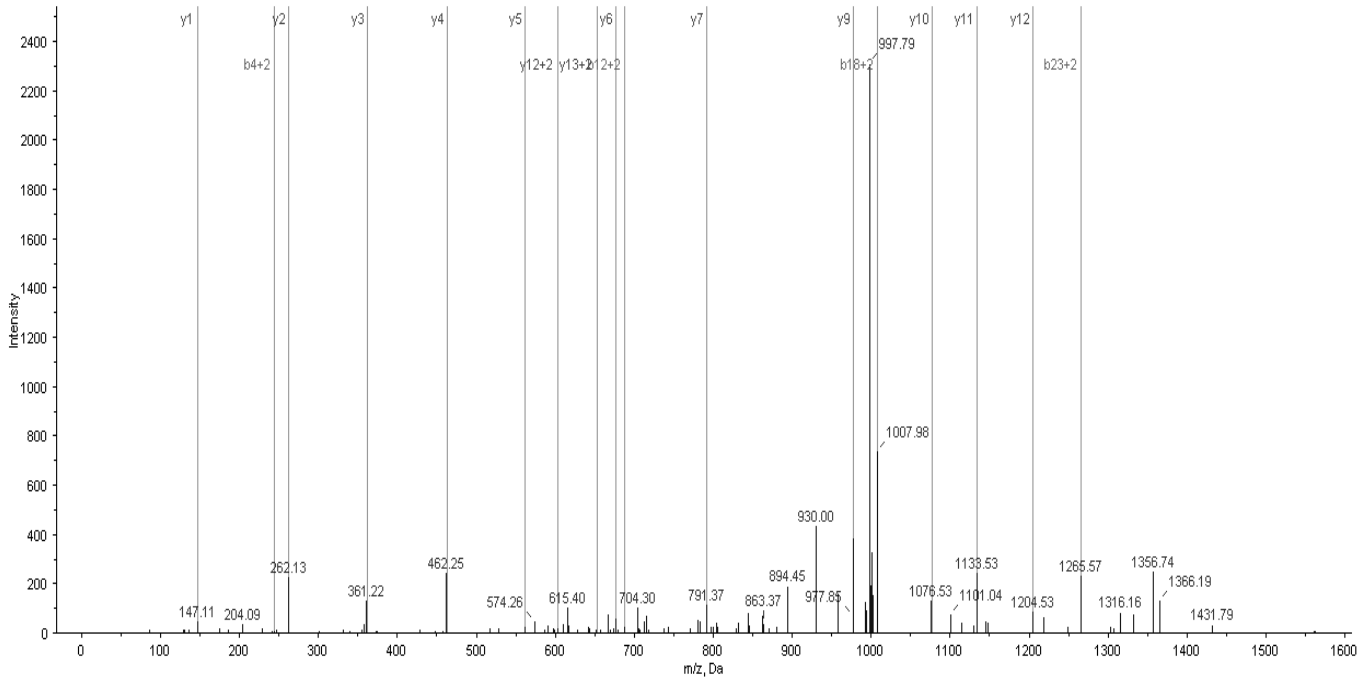


Name: SACE\_1524

Peptide PPL: NEETGLAAIVEEVAGVDADDVTVDK

Netphos Bac score: 0.239 (T@5) and 0.297(T@6)

Netphos V2.0 score: 0.328 (T@5) and 0.249(T@6)

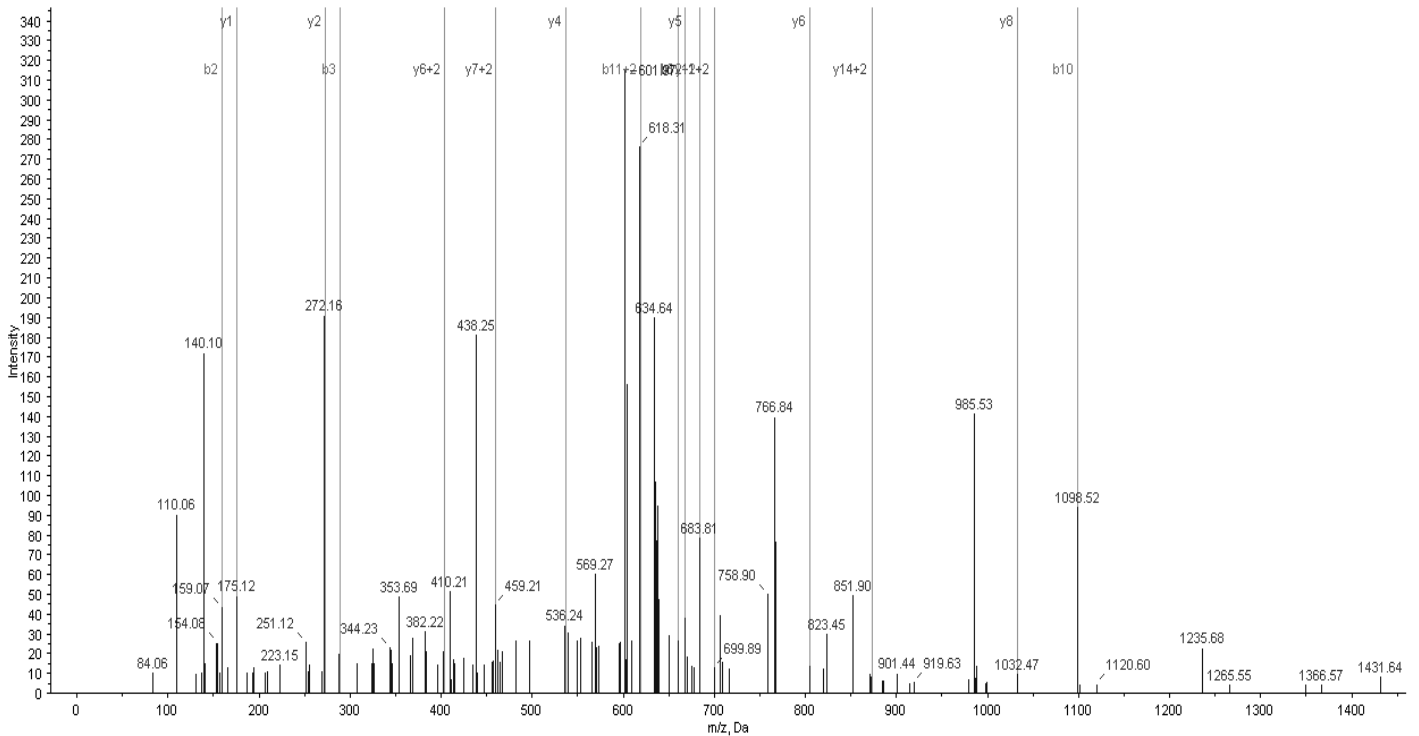


Name: SACE\_2043

Peptide PPL: TGETDRPIDLHMSPR

Netphos Bac score: 0.529

Netphos V2.0 score: 0.992

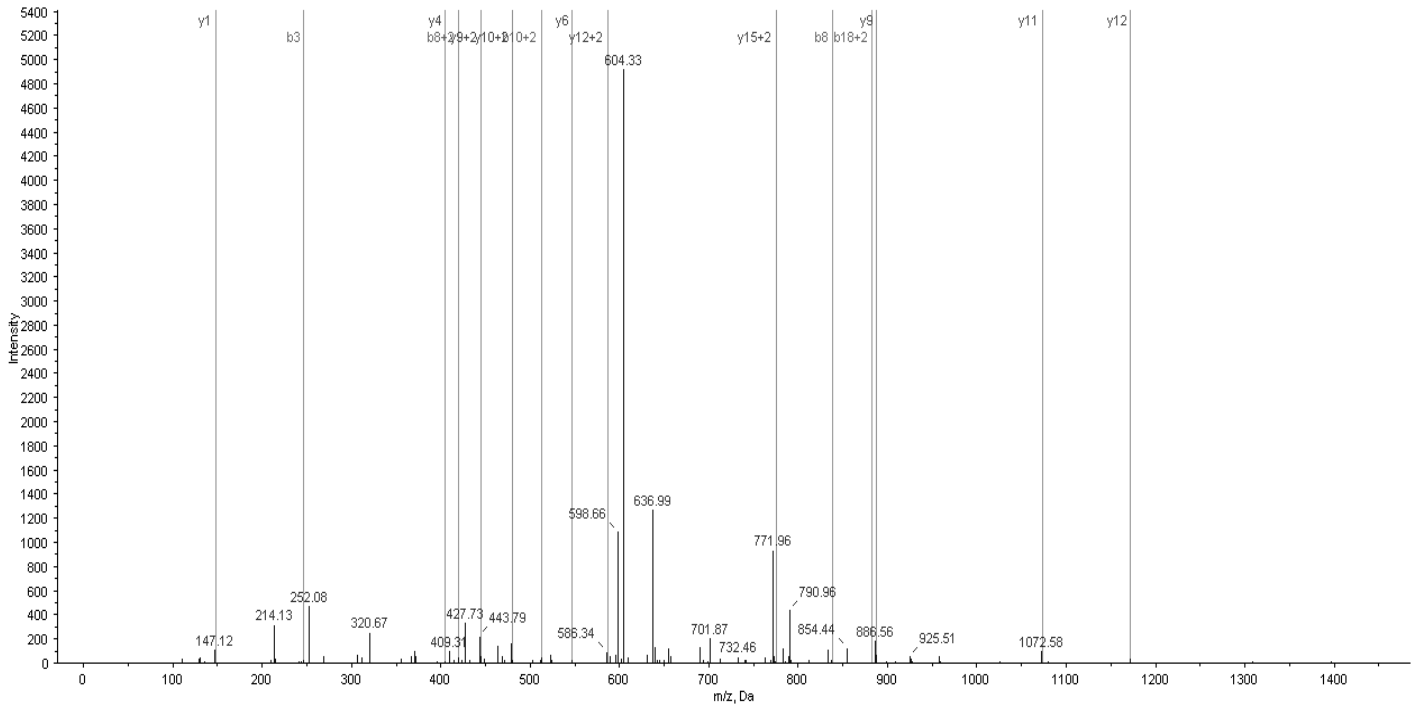


Name: SACE\_6140

Peptide PPL: TSGD**S**PIVNALIDAAEAGK

Netphos Bac score: 0.656

Netphos V2.0 score: 0.992

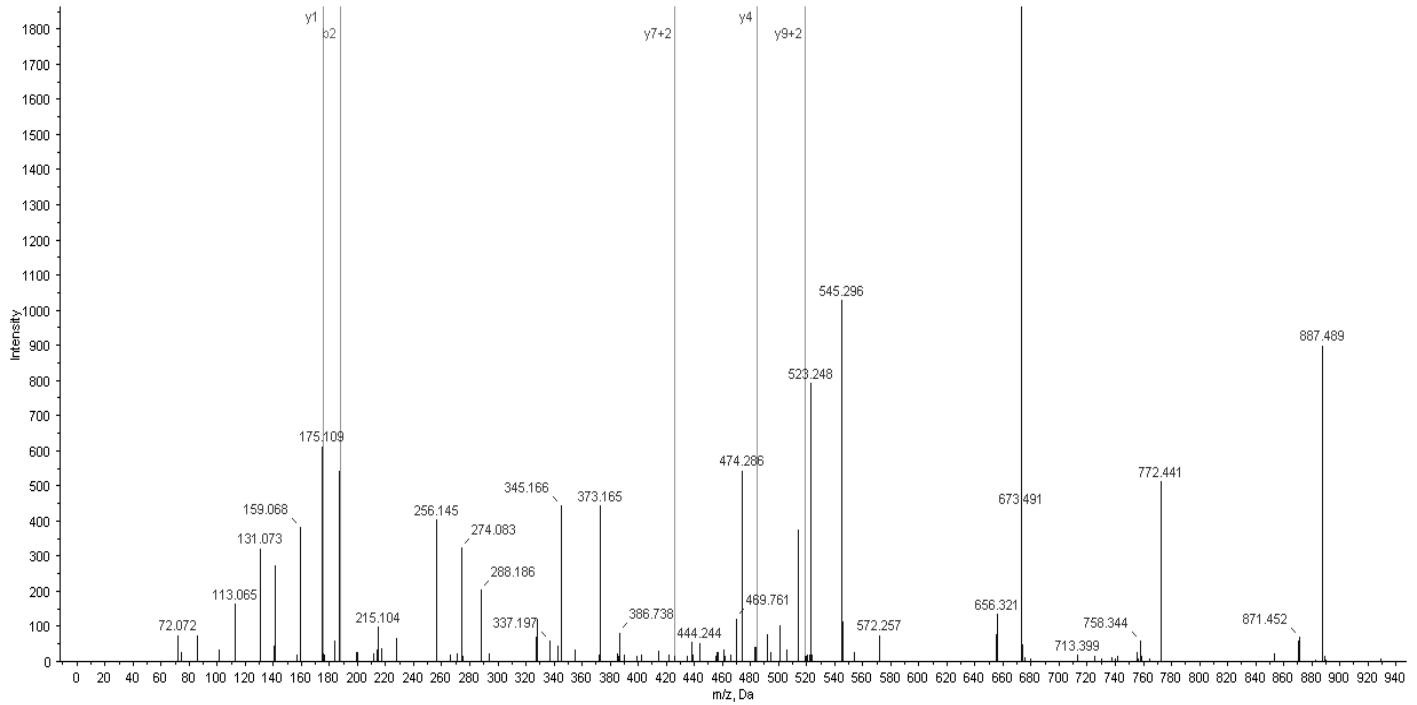


Name: SACE\_3899

Peptide PPL: VSG**T**KHTAR

Netphos Bac score: 0.453

Netphos V2.0 score: 0.150

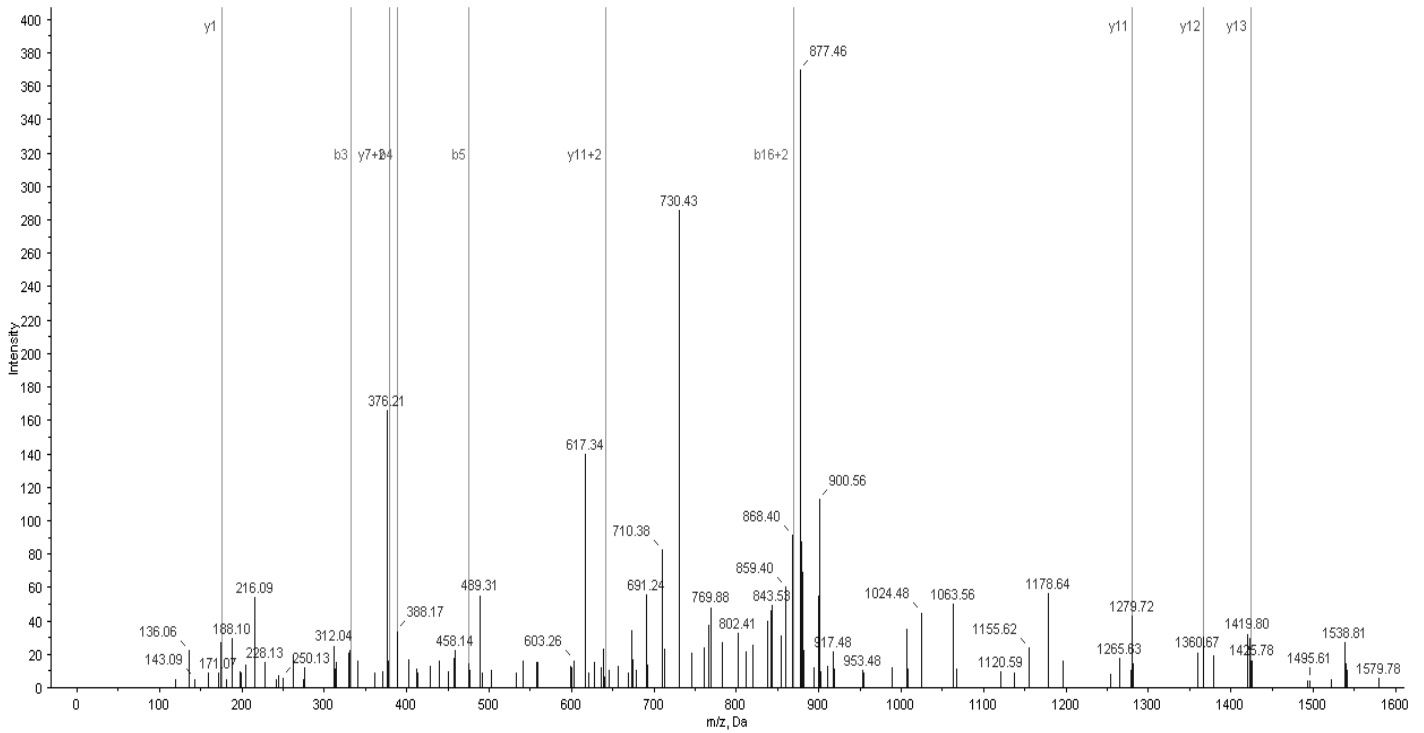


Name: SACE\_1099

Peptide PPL: WSGGS<sup>T</sup>DLDDPIAAIR

Netphos Bac score: 0.453

Netphos V2.0 score: 0.177

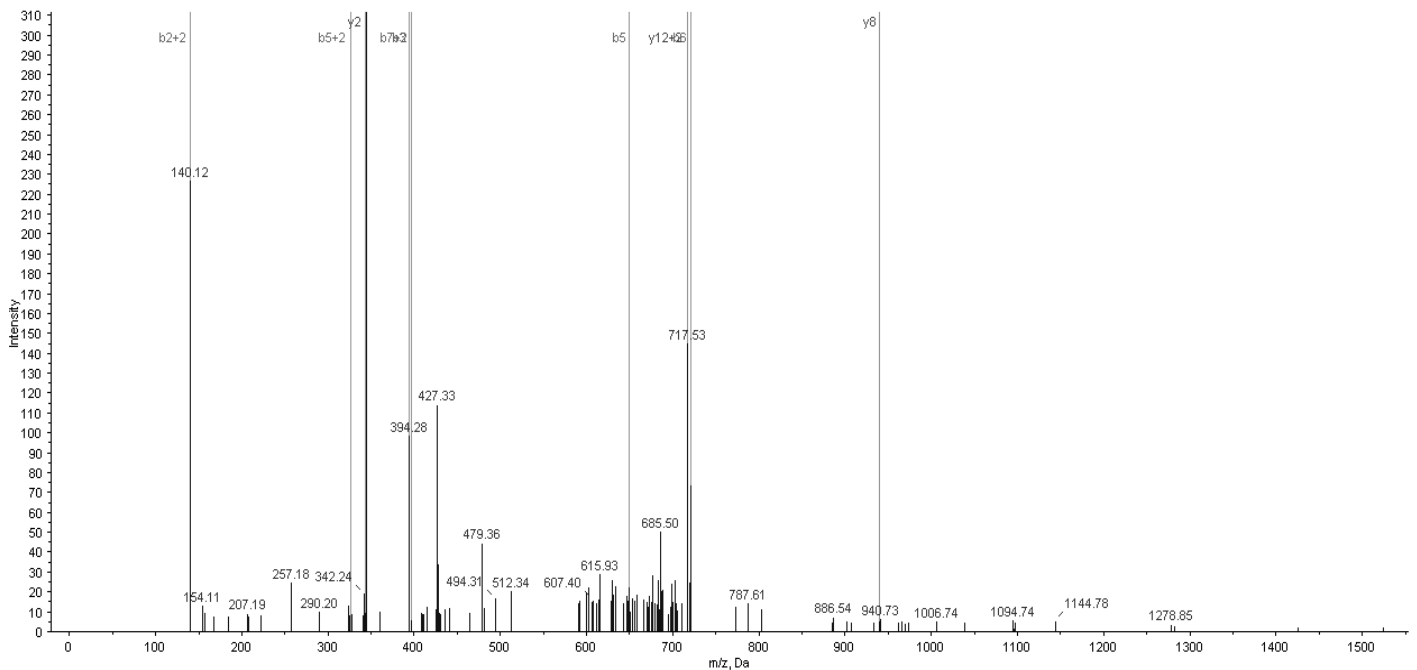


Name: SACE\_1158

Peptide PPL: YDDVRAALAD<sup>S</sup>R

Netphos Bac score: 0.432

Netphos V2.0 score: 0.027

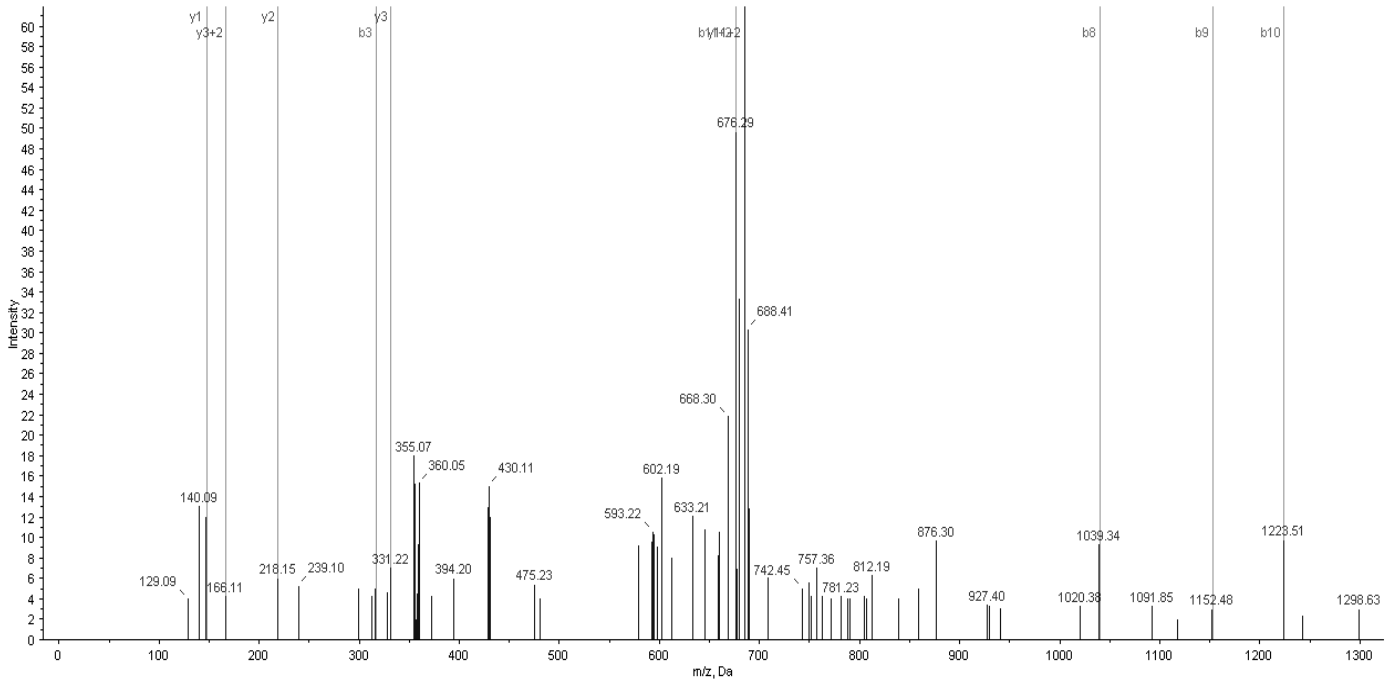


Name: SACE\_1449

Peptide PPL: SLNYSMFDLAK

Netphos Bac score: 0.207

Netphos V2.0 score: 0.588

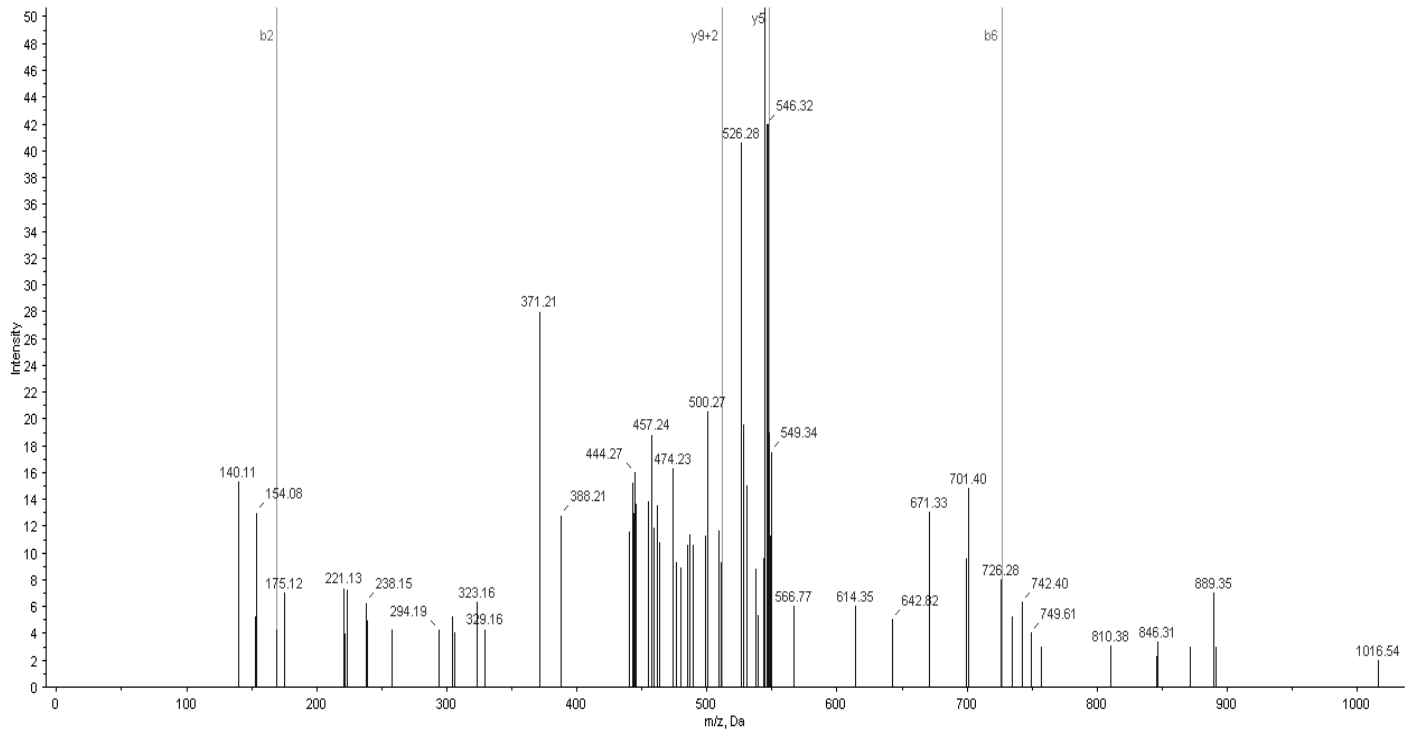


Name: SACE\_6280

Peptide PPL: APSFDQLEGKTEMLTGIK

Netphos Bac score: 0.390

Netphos V2.0 score: 0.341

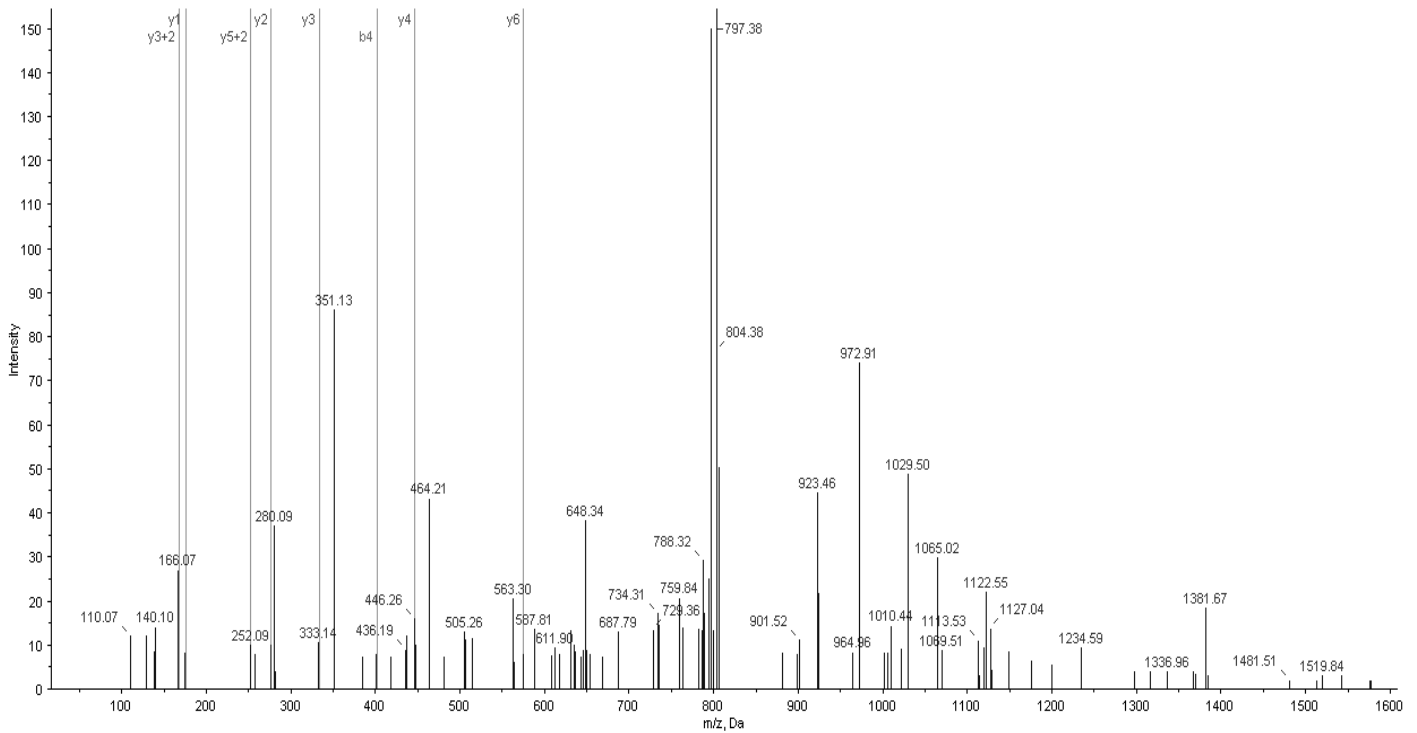


Name: SACE\_0774

Peptide PPL: DSPTL**T**AAAAFRTAIVPAAGLGTR

Netphos Bac score: 0.277

Netphos V2.0 score: 0.242

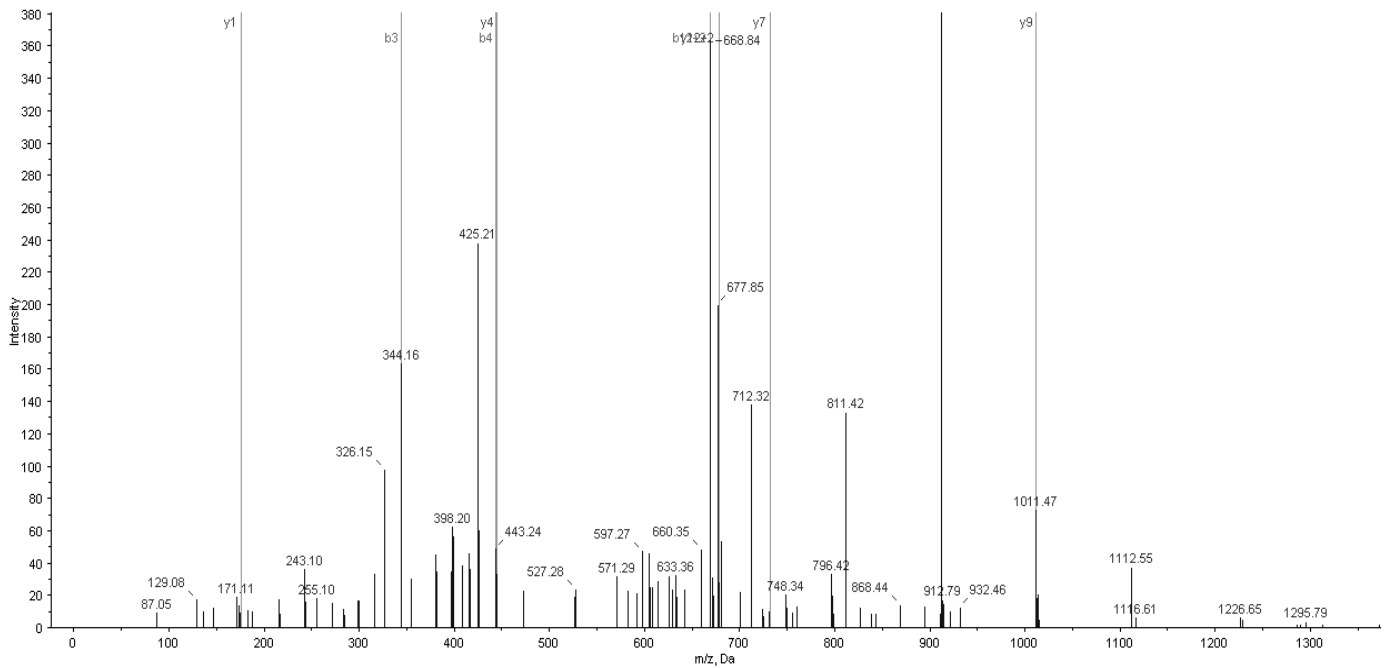


Name: SACE\_6945

Peptide PPL: TELV**T**VSTPGDR

Netphos Bac score: 0.260

Netphos V2.0 score: 0.013

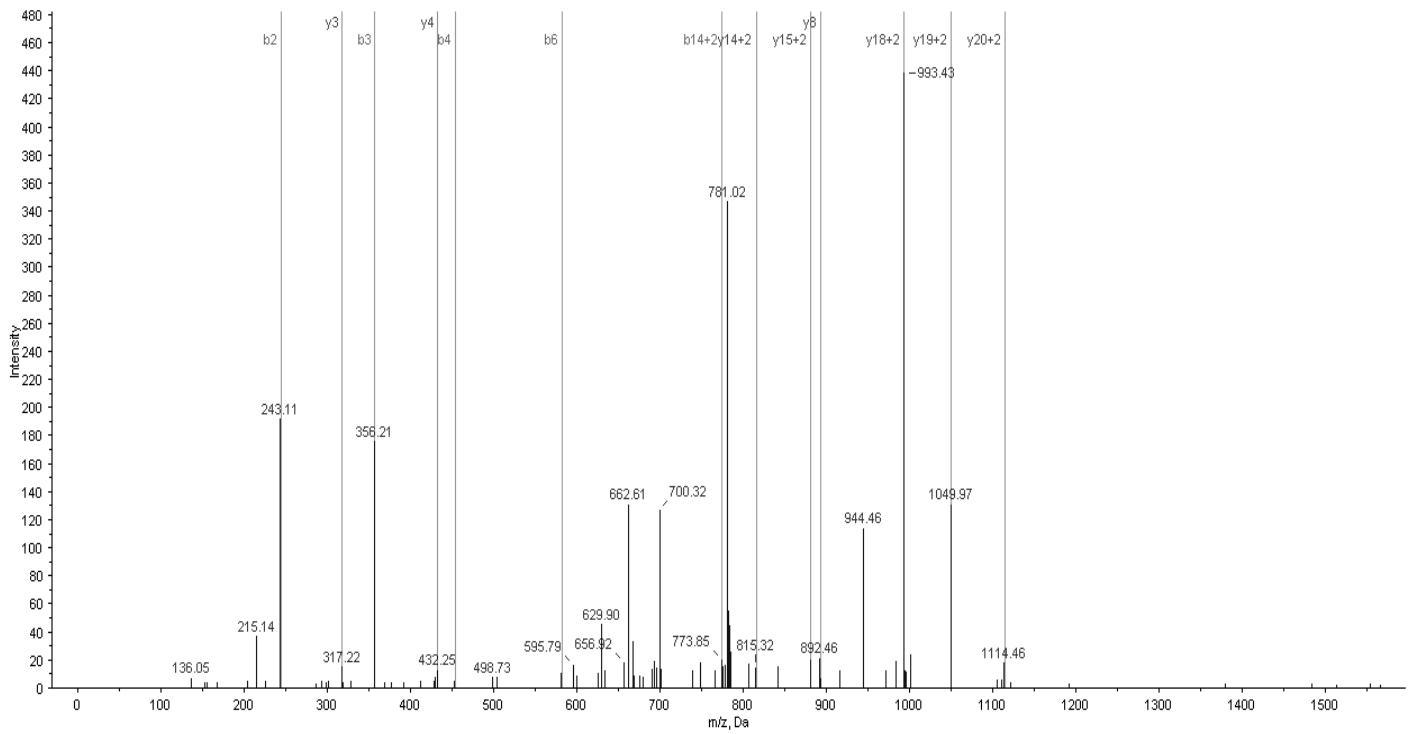


Name: SACE\_6460

Peptide PPL: LELPGAMFTAS<sup>H</sup>HNPAEYNGIK

Netphos Bac score: 0.353

Netphos V2.0 score: 0.074

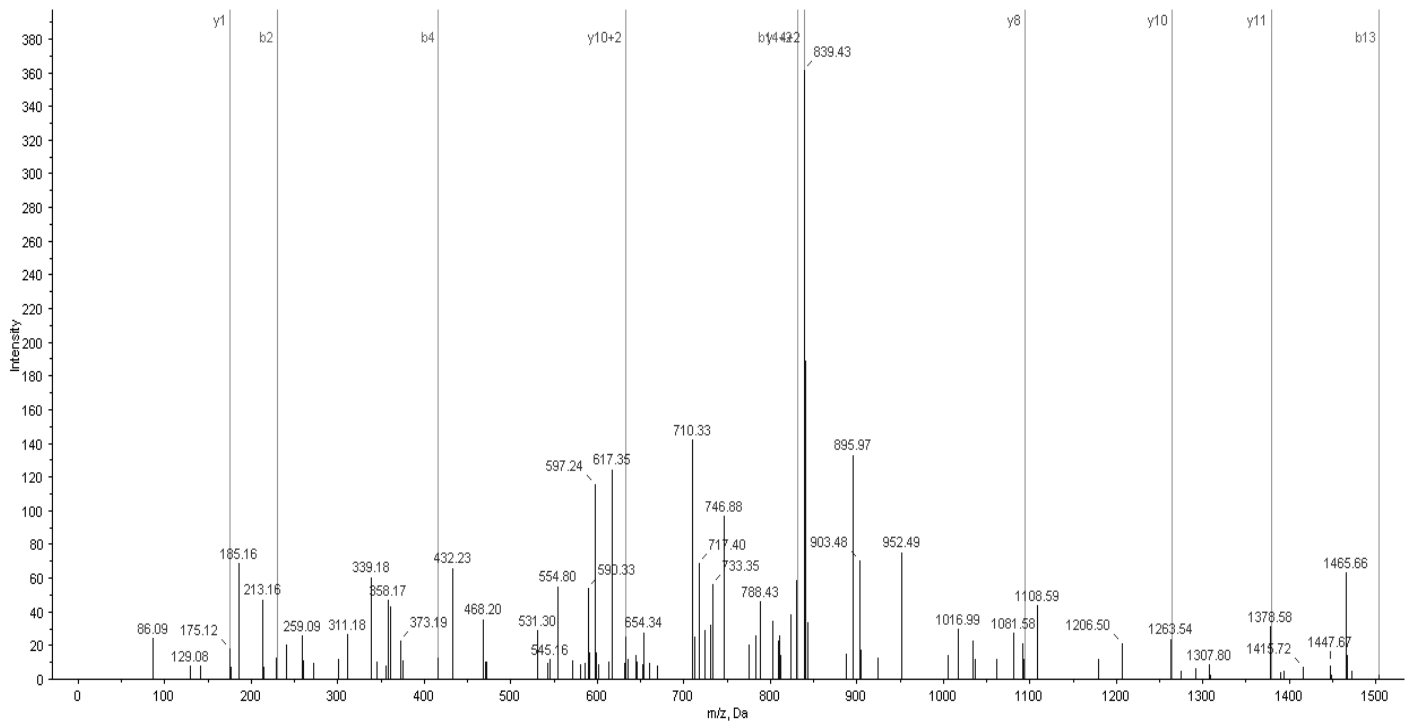


Name: SACE\_0114

Peptide PPL: LDADAVERLHAT<sup>M</sup>MR

Netphos Bac score: 0.218

Netphos V2.0 score: 0.712



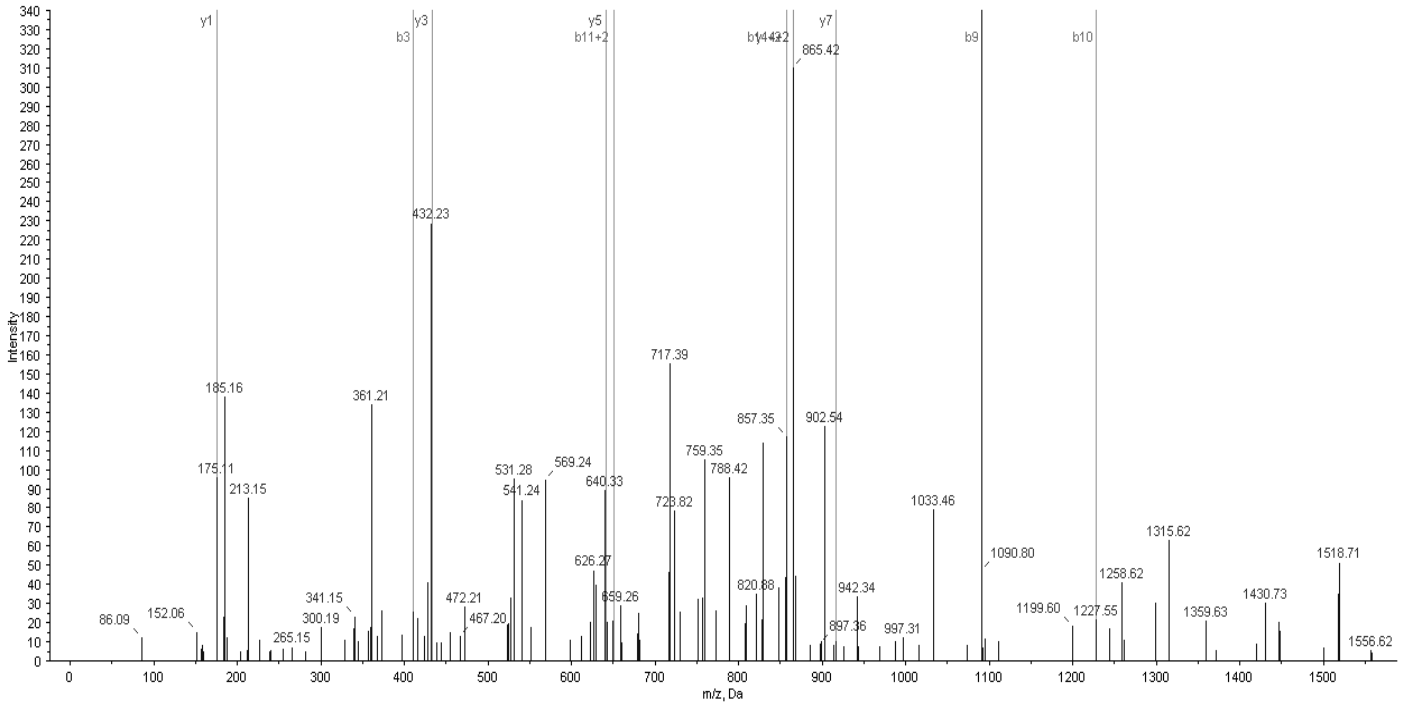


Name: SACE\_4070

Peptide PPL: MPTIGTVFLYHAQER

Netphos Bac score: 0.179

Netphos V2.0 score: 0.643

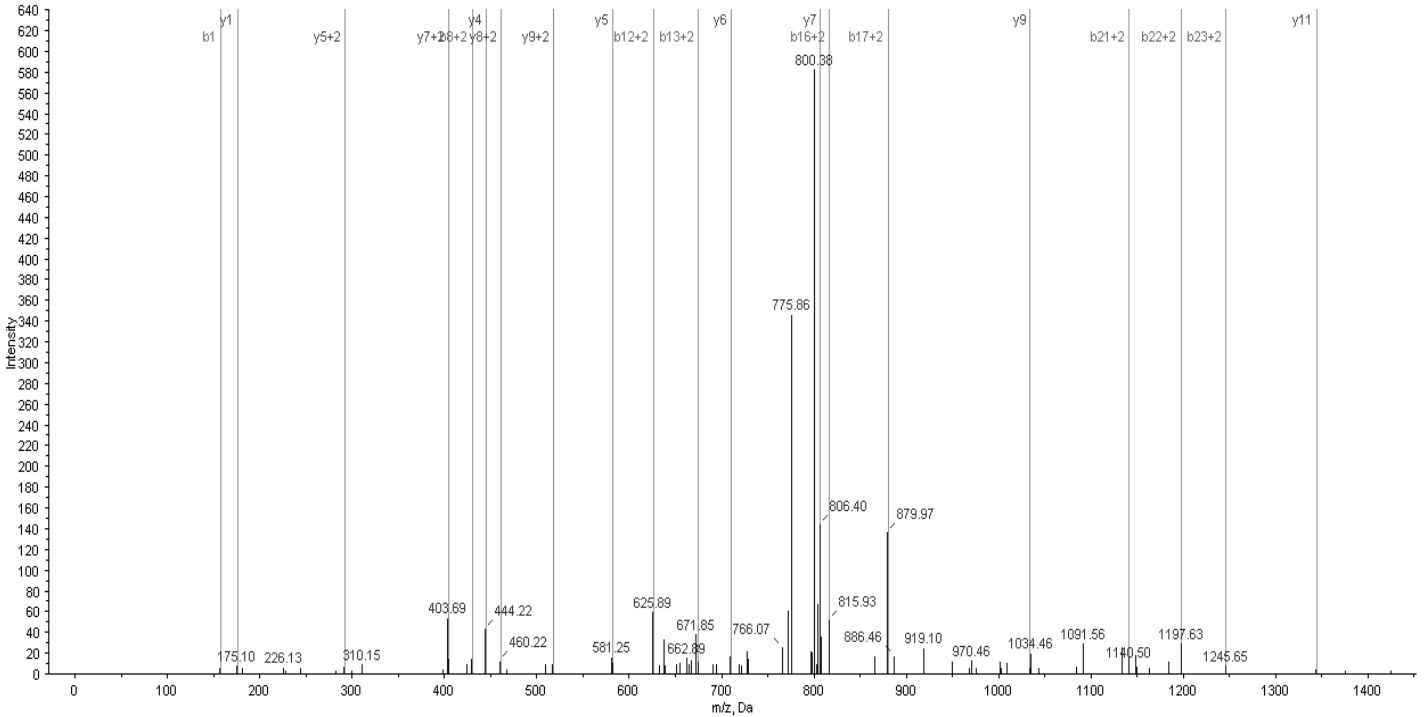


Name: SACE\_7356

Peptide PPL: RVPPPPGRPPQAPPGEQPTENIPQHGGDR

Netphos Bac score: 0.154

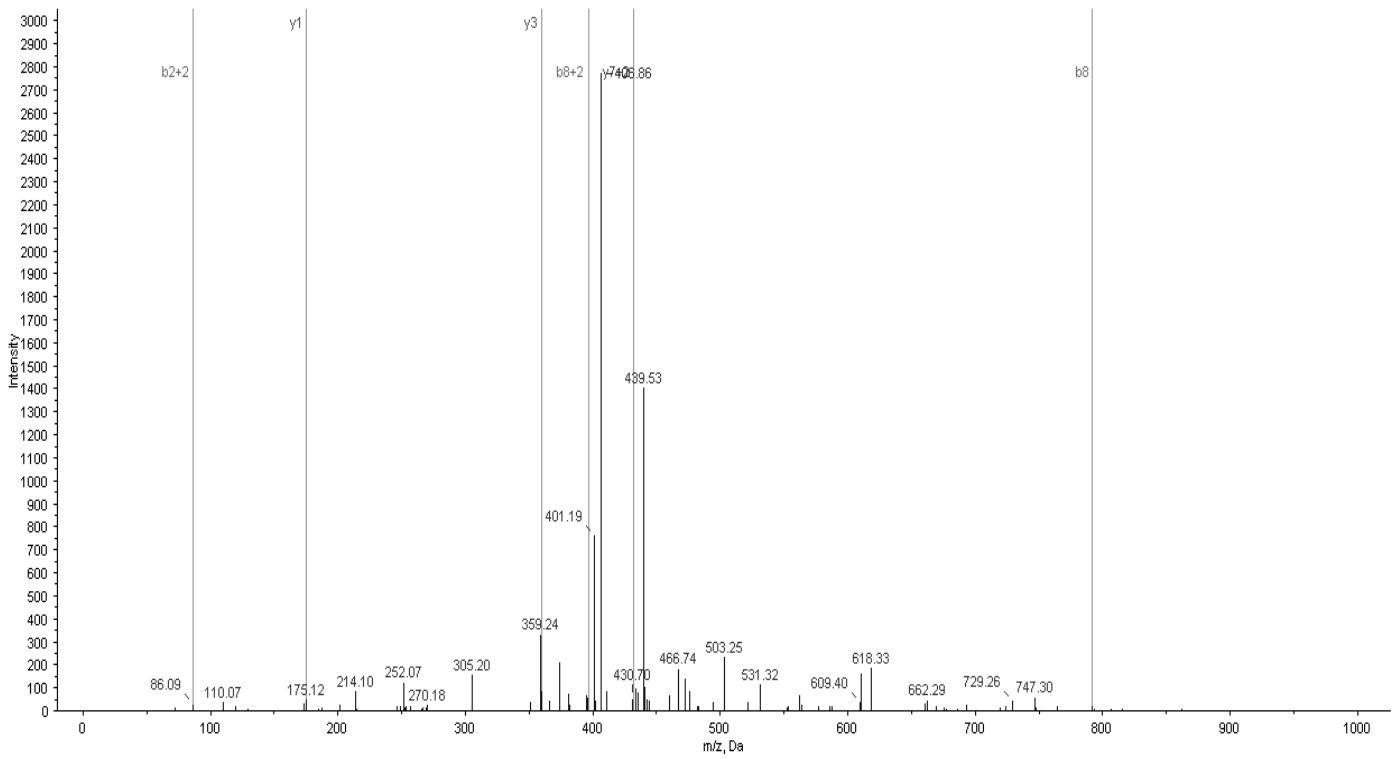
Netphos V2.0 score: 0.038



Peptide PPL: GIGEVYDGS<sup>S</sup>SPR

Netphos Bac score: 0.620

Netphos V2.0 score: 0.055

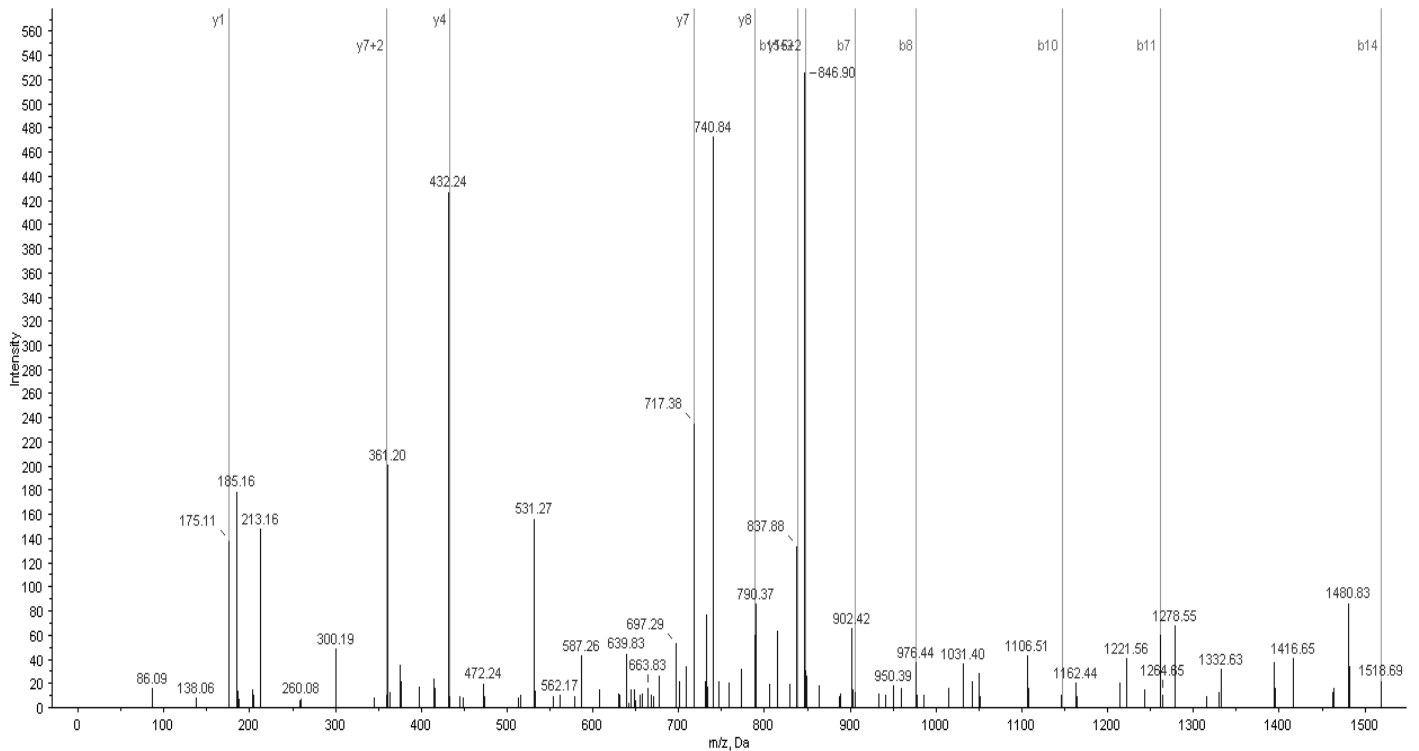


Name: SACE\_5677

Peptide PPL: TNVEHVYAIGDVTGR

Netphos Bac score: 0.478

Netphos V2.0 score: 0.038



Name: SACE\_6118

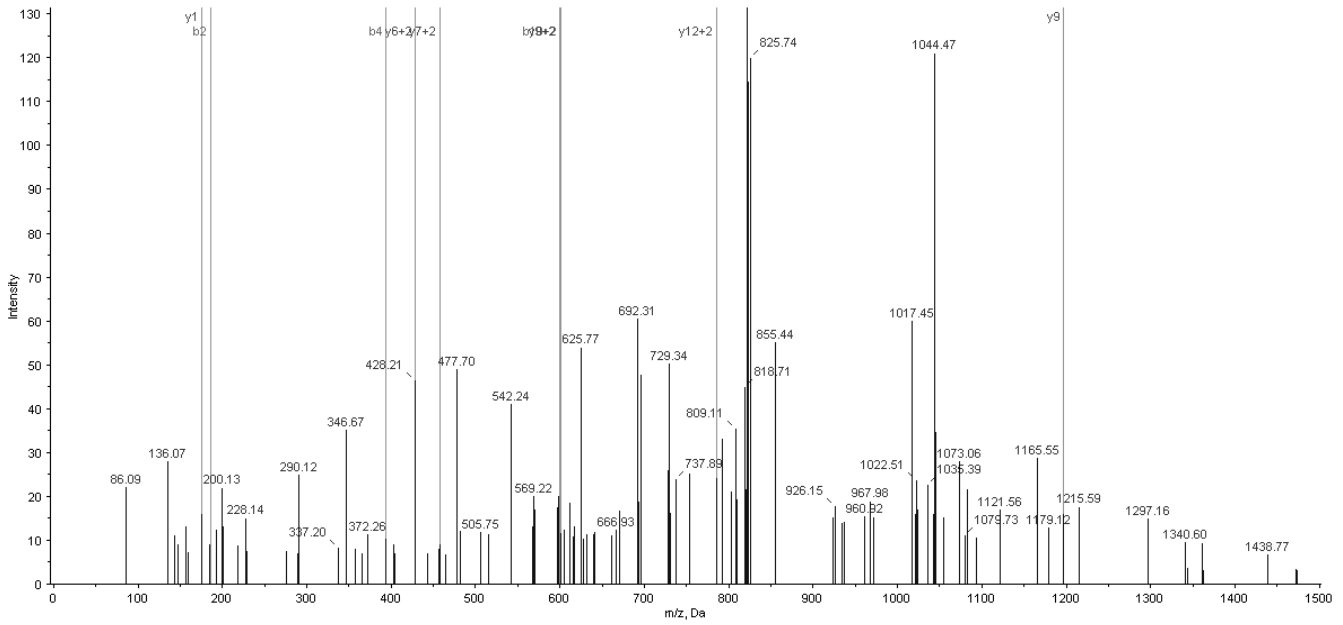
Peptide PPL: ALEGR**T**GERKLAELSEEDRKGL**T**DDRR

Netphos Bac score: 0.563

Netphos V2.0 score: 0.048

Netphos Bac score: 0.571

Netphos V2.0 score: 0.212

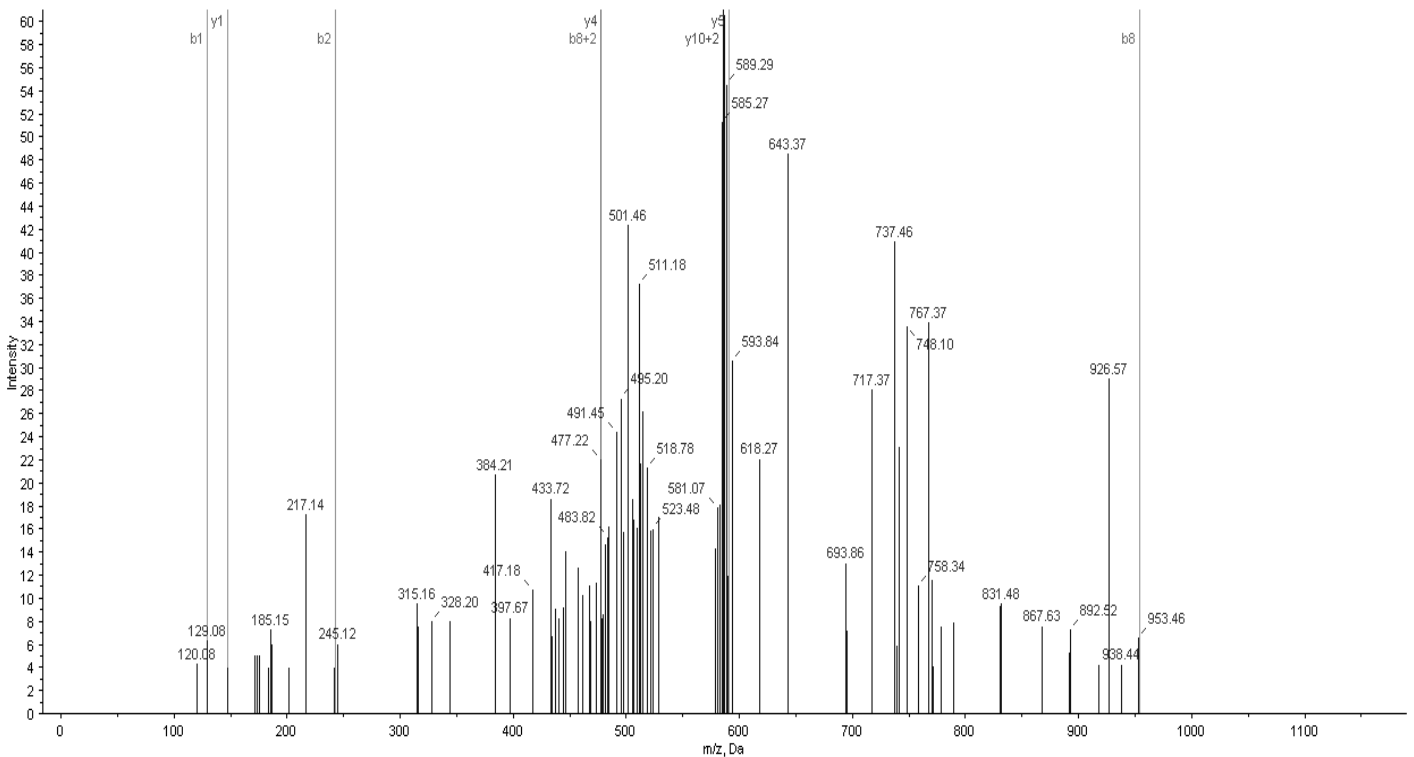


Name: SACE\_1736

Peptide PPL: KL**T**SALYNAK

Netphos Bac score: 0.546

Netphos V2.0 score: 0.011

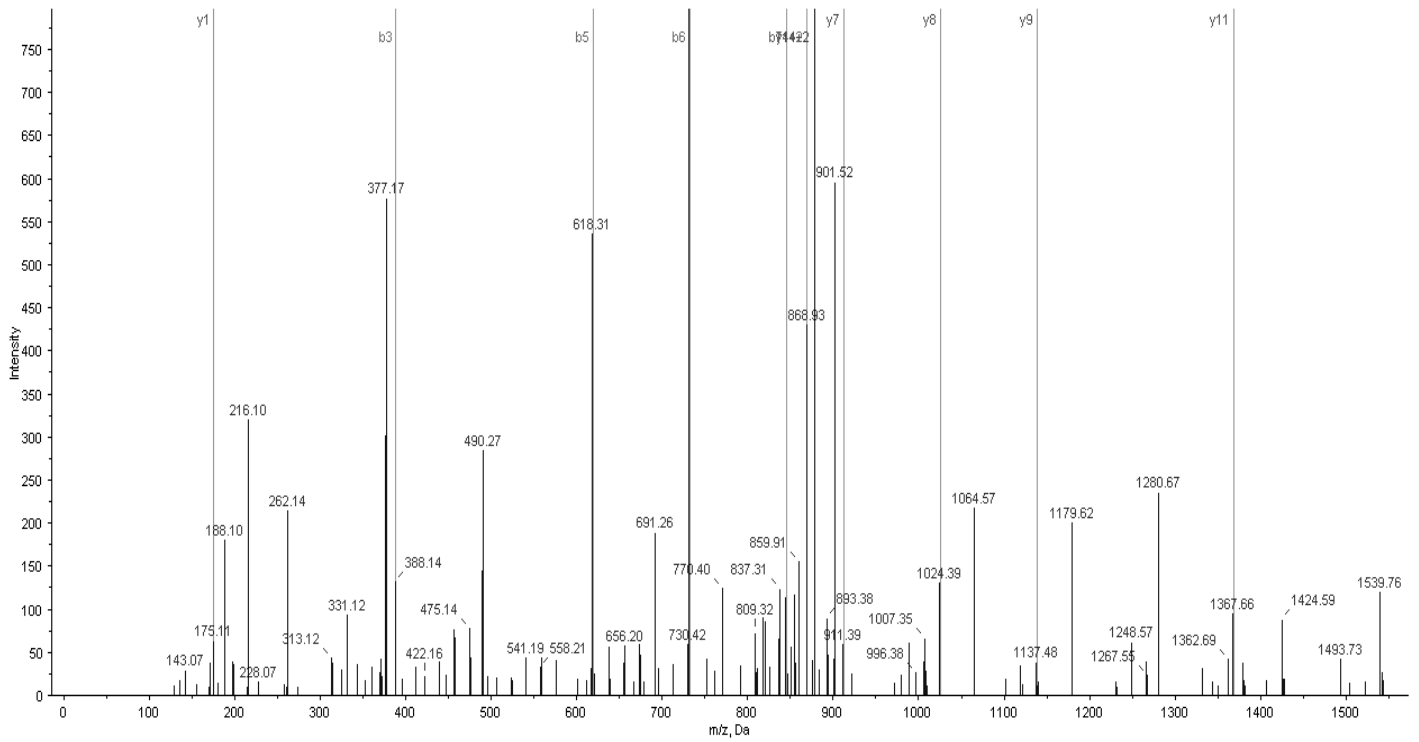


Name: SACE\_7351

Peptide PPL: YELMVILDP**S**LDER

Netphos Bac score: 0.530

Netphos V2.0 score: 0.252

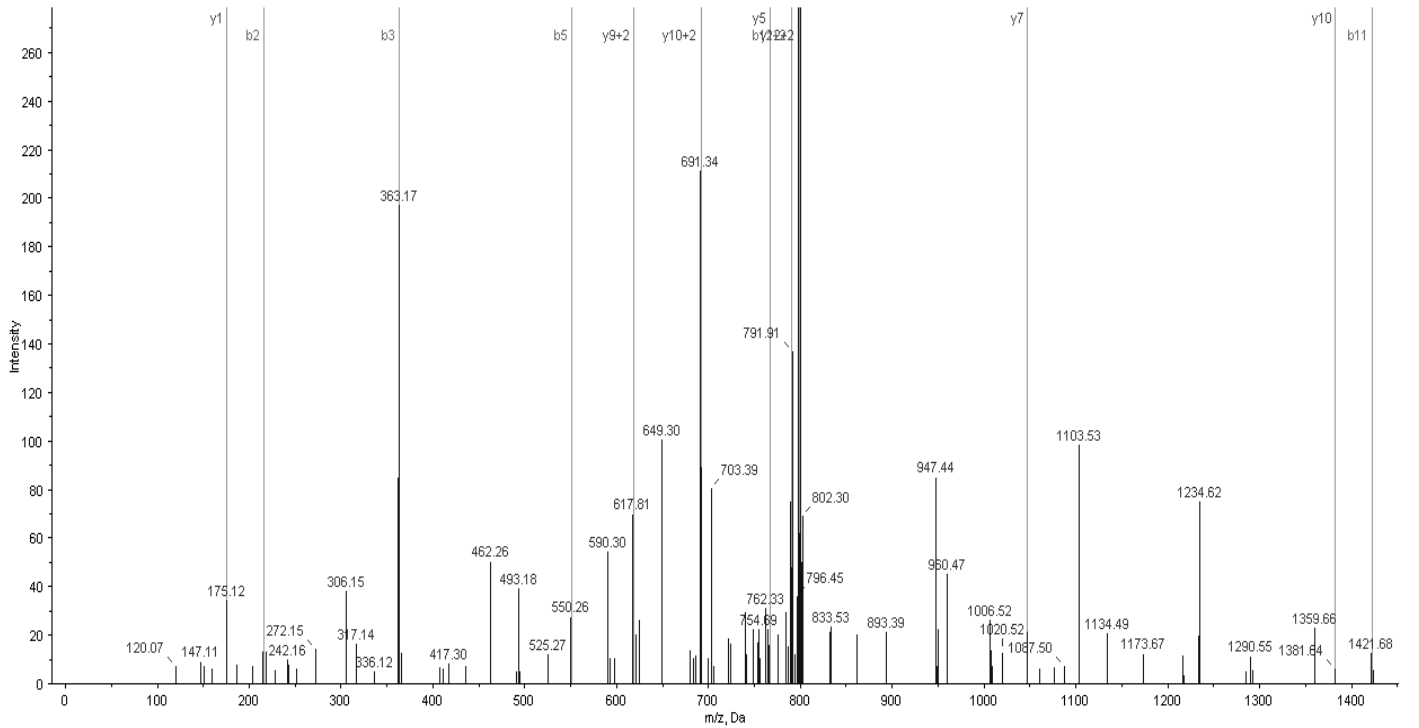


Name: SACE\_0194

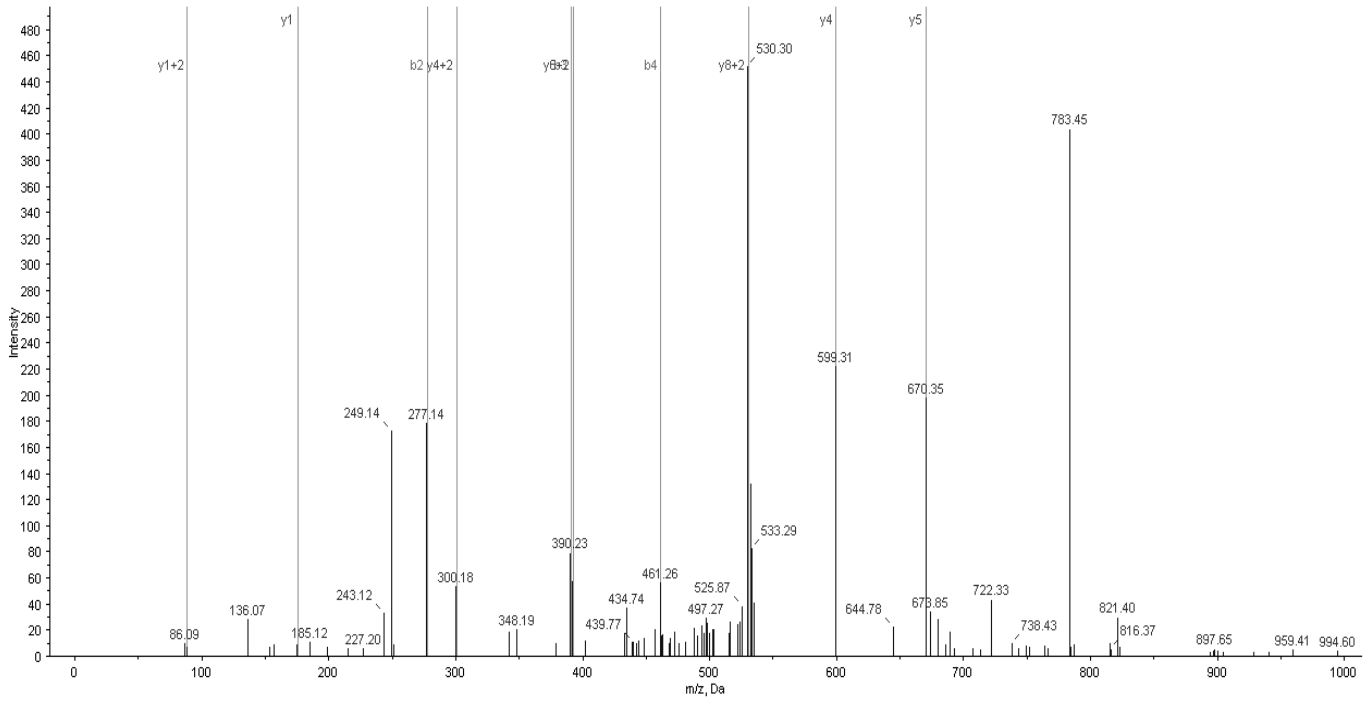
Peptide PPL: LTFSTL**S**EIWYR

Netphos Bac score: 0.607

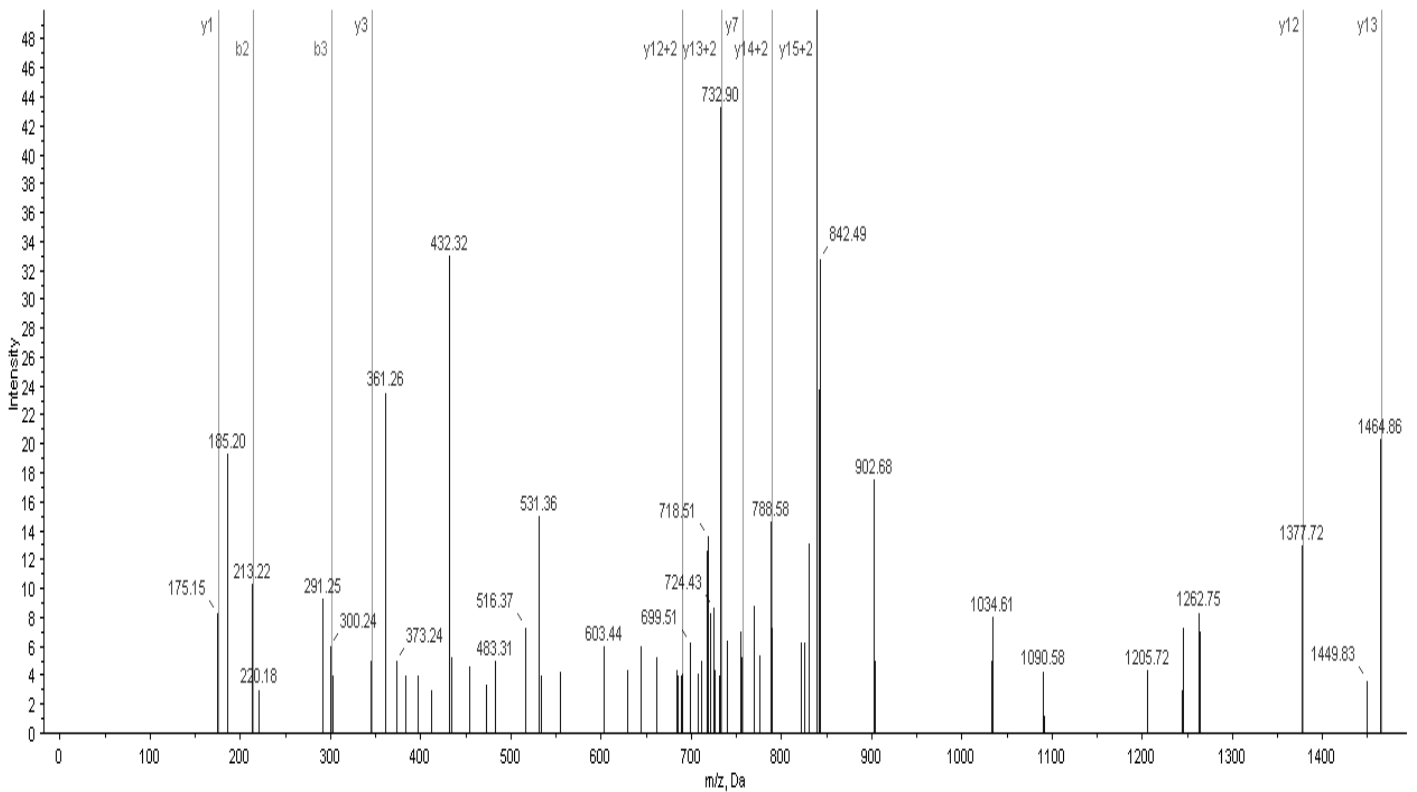
Netphos V2.0 score: 0.907



Name: **SACE\_0195**  
Peptide PPL: **LYLAKE****S**R  
Netphos Bac score: 0.240  
Netphos V2.0 score: 0.322



Peptide PPL: **VIST****P**PDVEVIKAVR  
Netphos Bac score: 0.507  
Netphos V2.0 score: 0.963

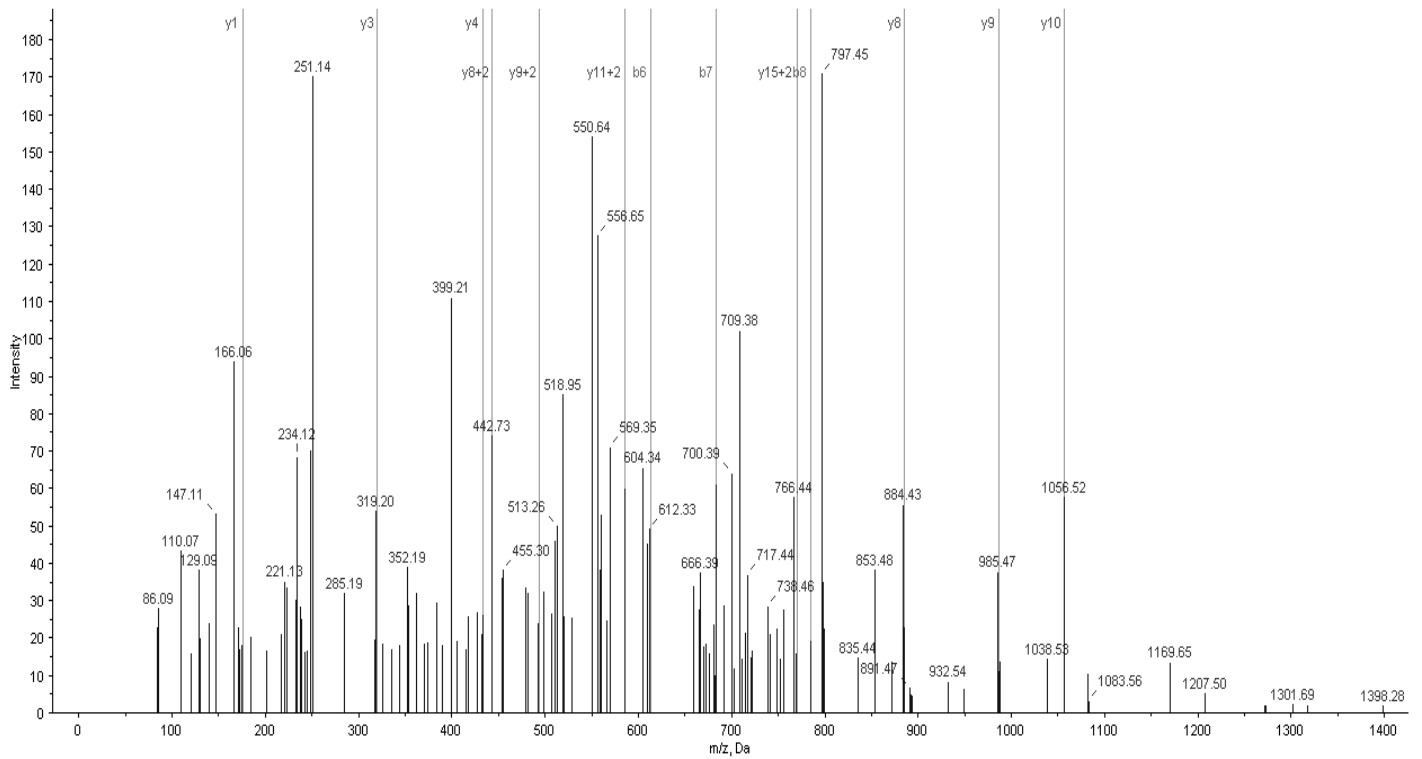


Name: SACE\_0461

Peptide PPL: SLAALPATTAVISGR

Netphos Bac score: 0.241

Netphos V2.0 score: 0.581

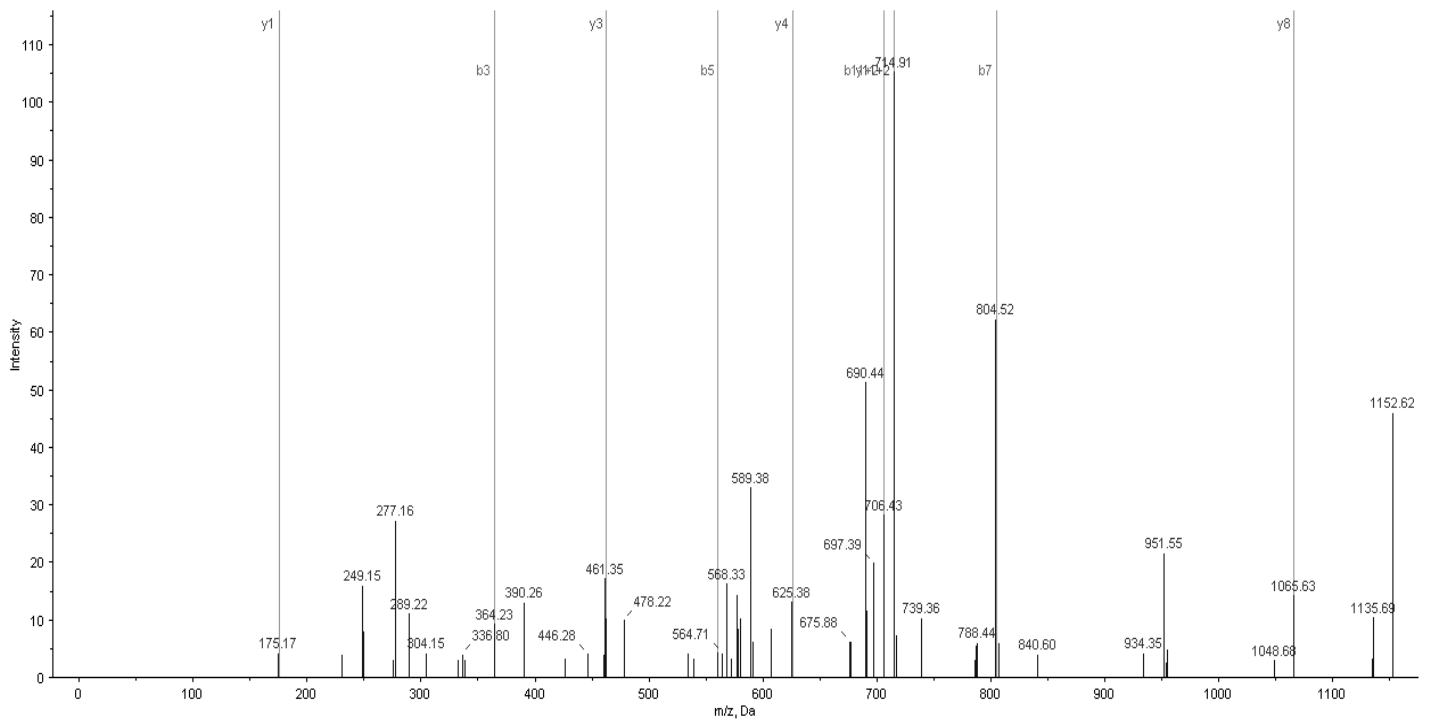


Name: SACE\_0602

Peptide PPL: VSPVPEDYTW R

Netphos Bac score: 0.368

Netphos V2.0 score: 0.032

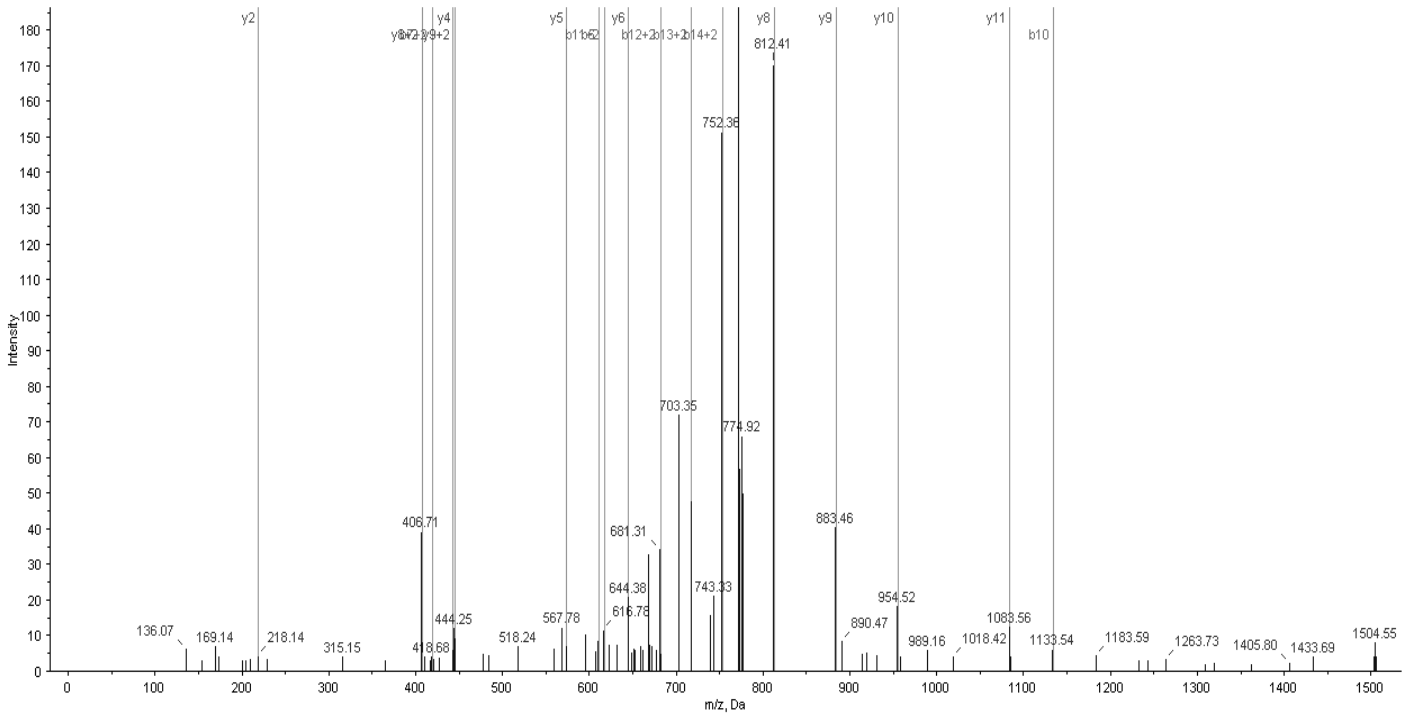


Name: SACE\_1406

Peptide PPL: GKSQEPETPVVEAAPAAEPEAK

Netphos Bac score: 0.634

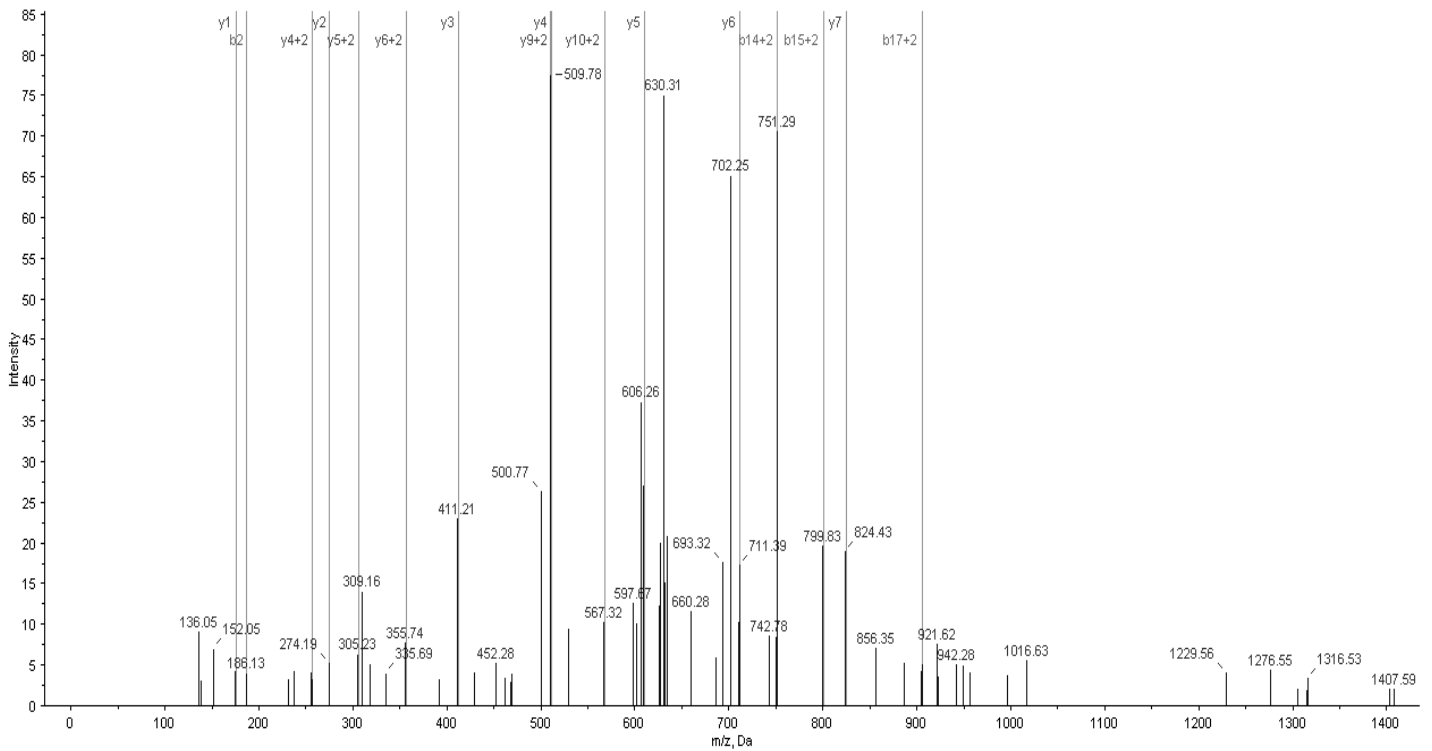
Netphos V2.0 score: 0.997



Peptide PPL: KGSGDDDSGTRDDPPNTVVHVR

Netphos Bac score: 0.266

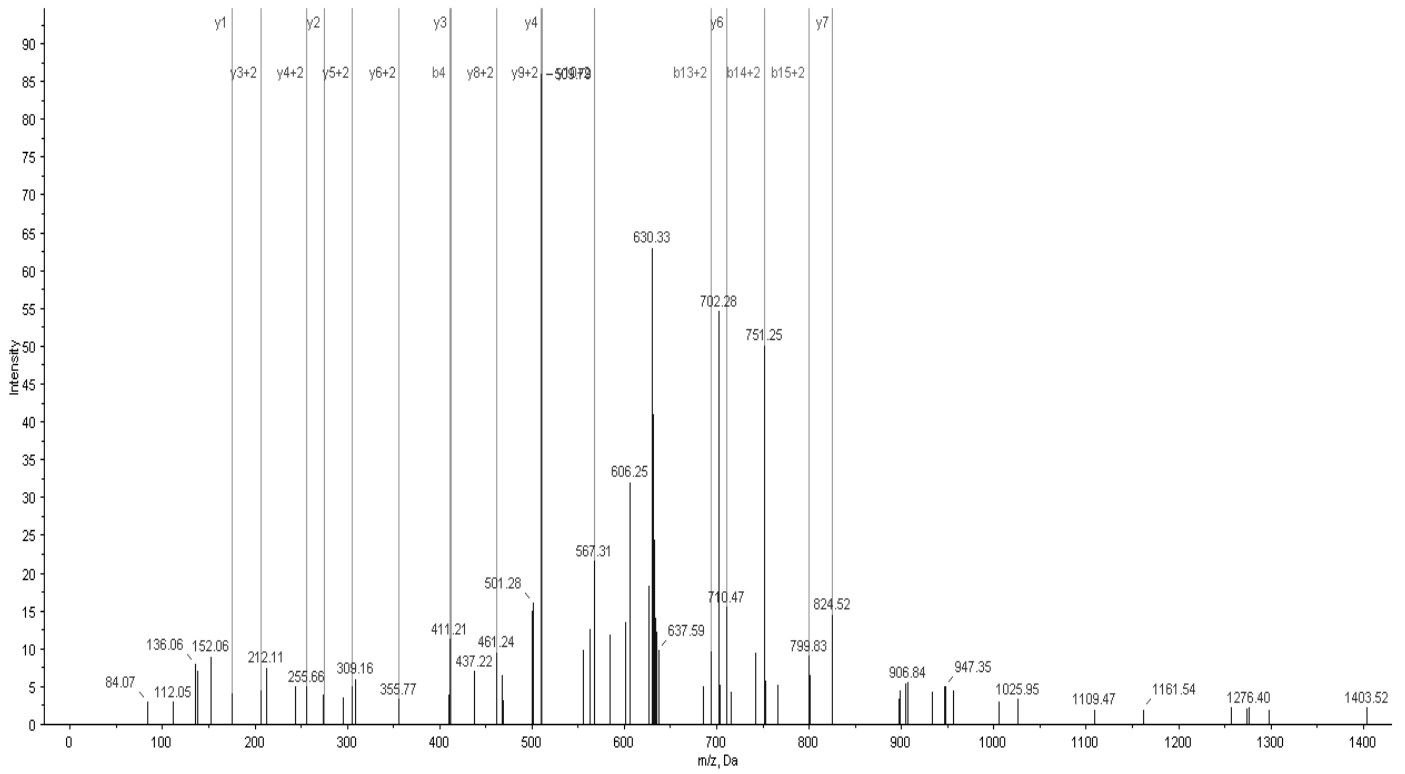
Netphos V2.0 score: 0.503



Peptide PPL: KGS<sup>Y</sup>GDDDSGTRDDDDPPNTVVHVR

Netphos Bac score: 0.266

Netphos V2.0 score: 0.503

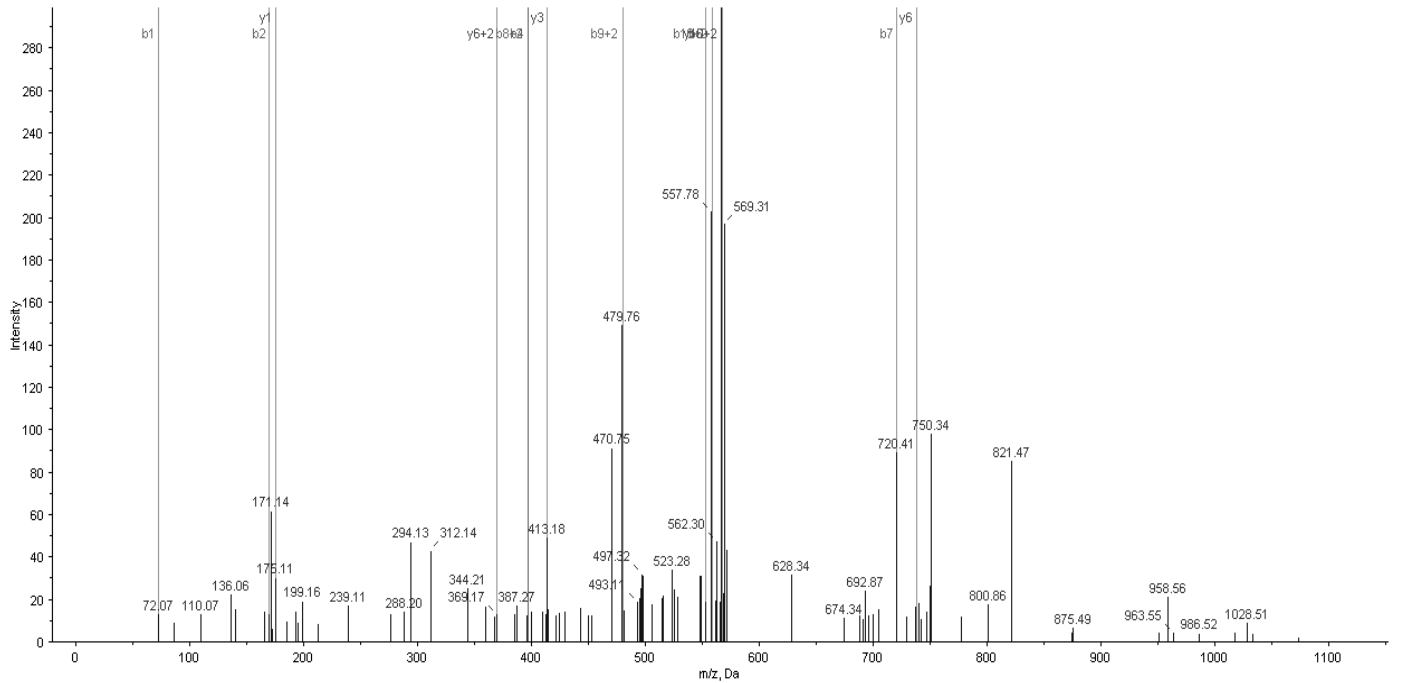


Name: SACE\_3268

Peptide PPL: APARRPAAS<sup>R</sup>

Netphos Bac score: 0.440

Netphos V2.0 score: 0.992



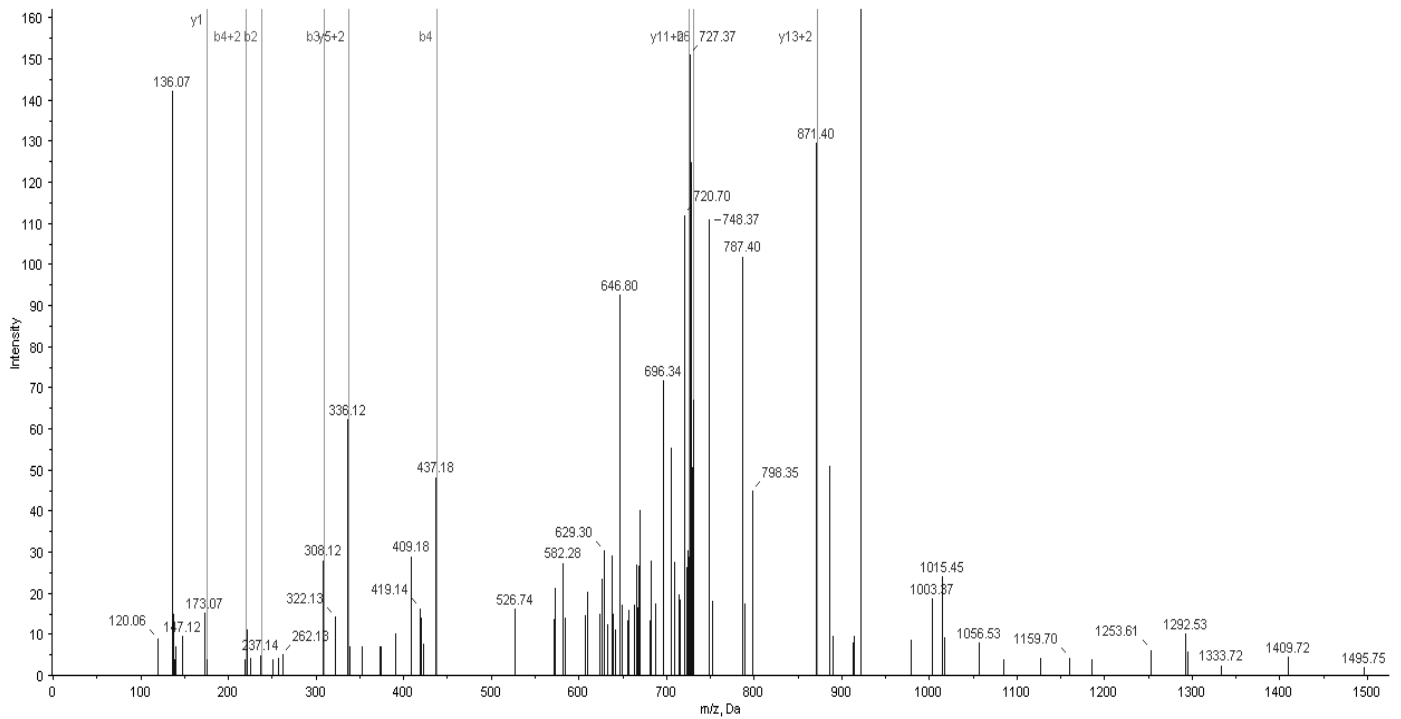


Name: SACE\_3448

Peptide PPL: HVAERHPLSLRMHTEER

Netphos Bac score: 0.507

Netphos V2.0 score: 0.965

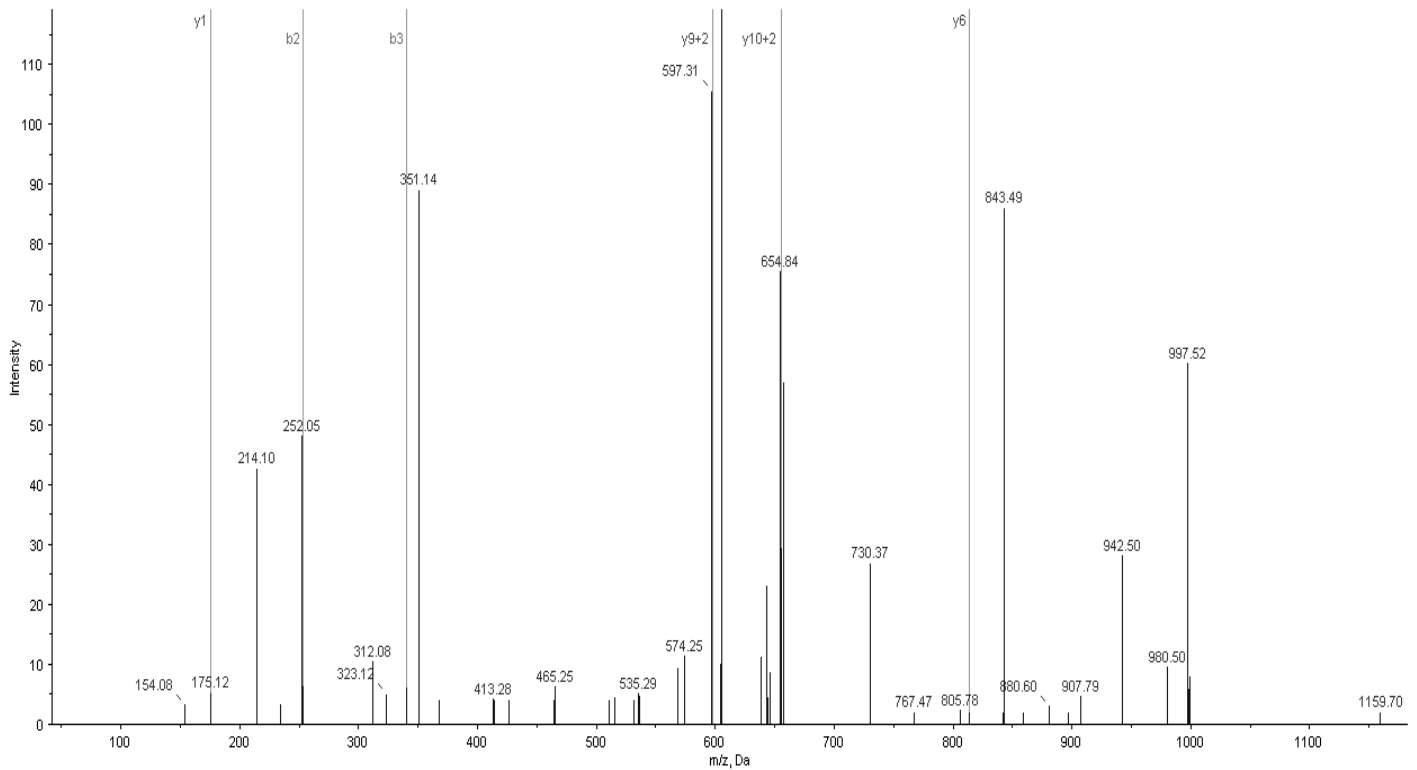


Name: SACE\_3776

Peptide: DHSRAMRLSR

Netphos Bac score: 0.313

Netphos V2.0 score: 0.992

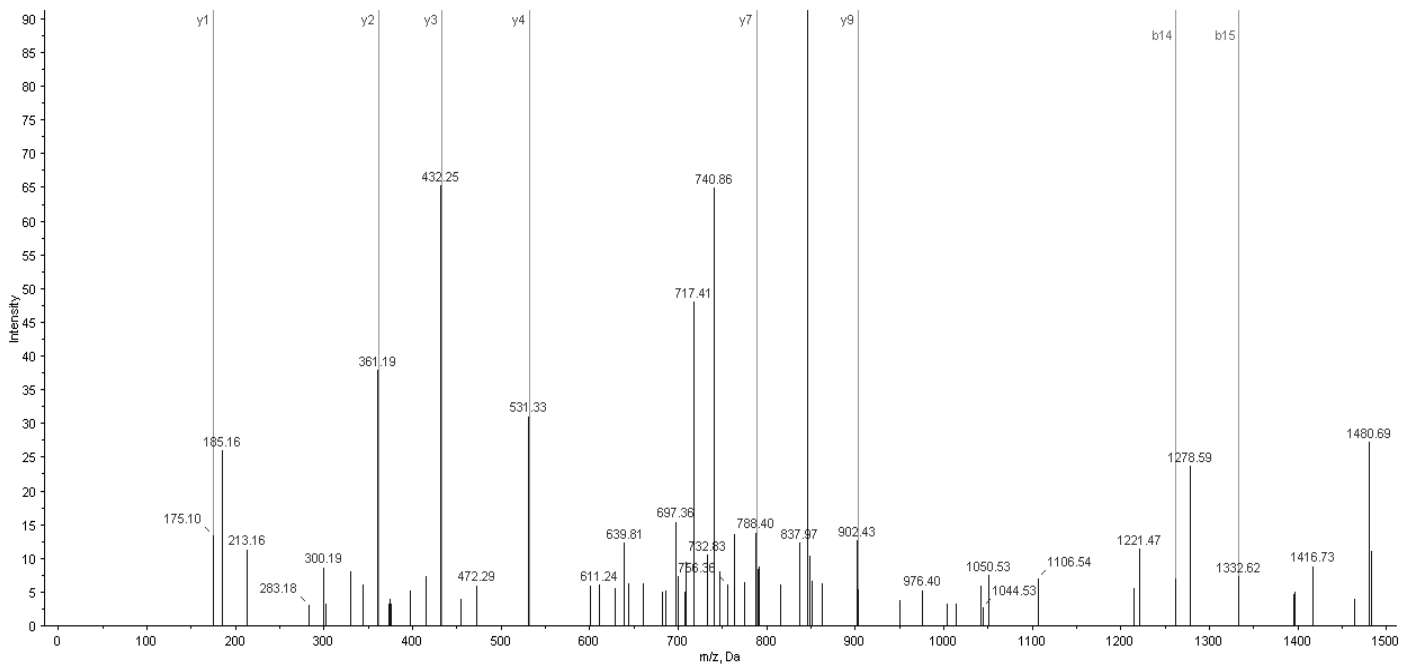


Name: SACE\_4206

Peptide: GGTAPGLRGGDAAVAWR

Netphos Bac score: 0.419

Netphos V2.0 score: 0.242

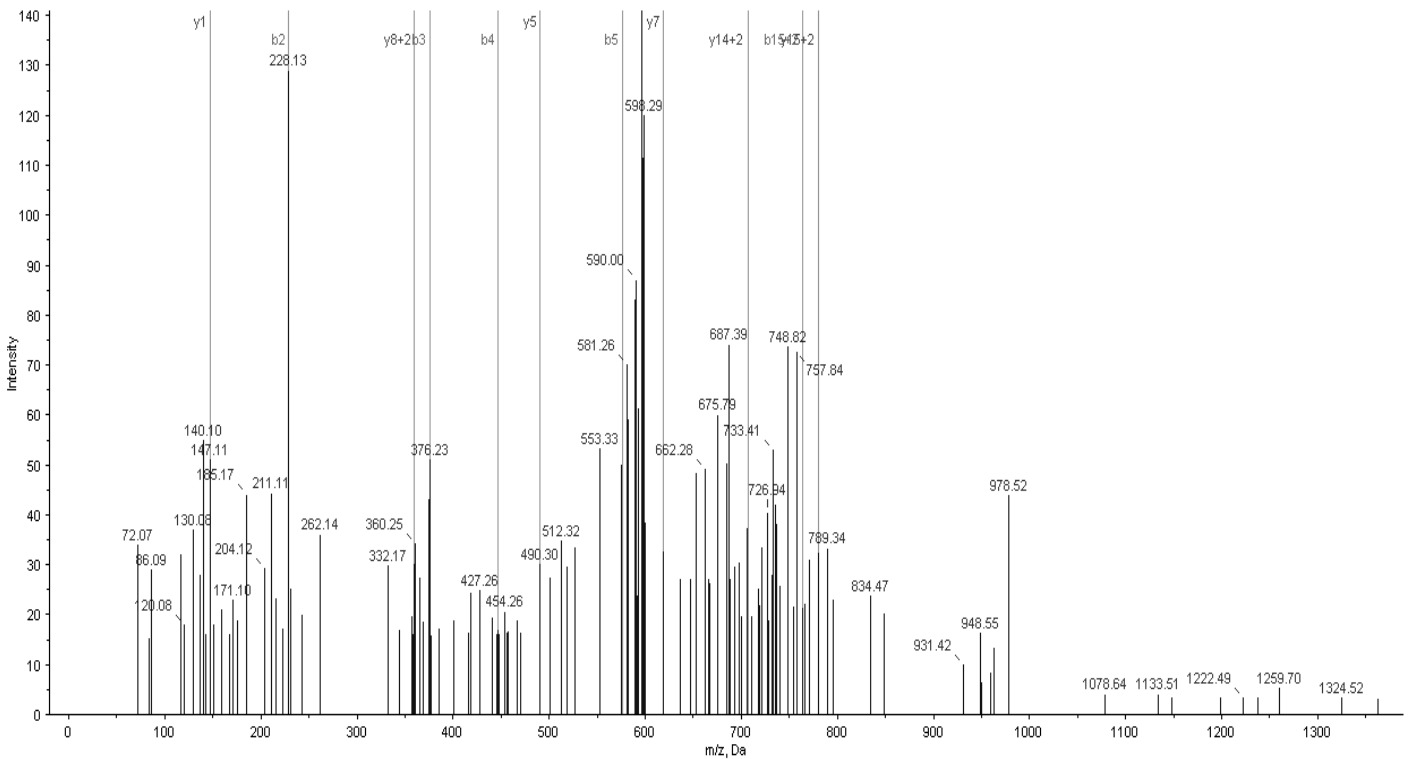


Name: SACE\_4237

Peptide: RAMAQTIVIVAGGATNK

Netphos Bac score: 0.176

Netphos V2.0 score: 0.510

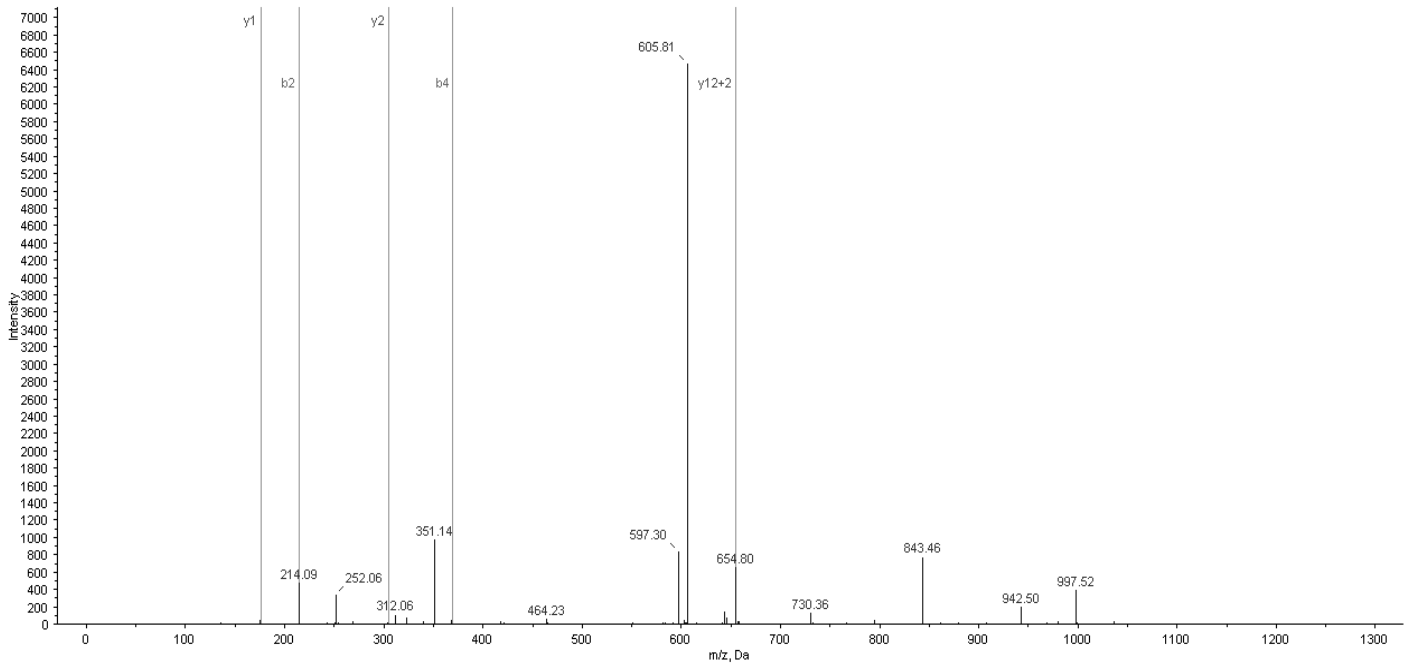


Name: SACE\_4660

Peptide PPL: GRPGASAAATRER

Netphos Bac score: 0.627

Netphos V2.0 score: 0.022

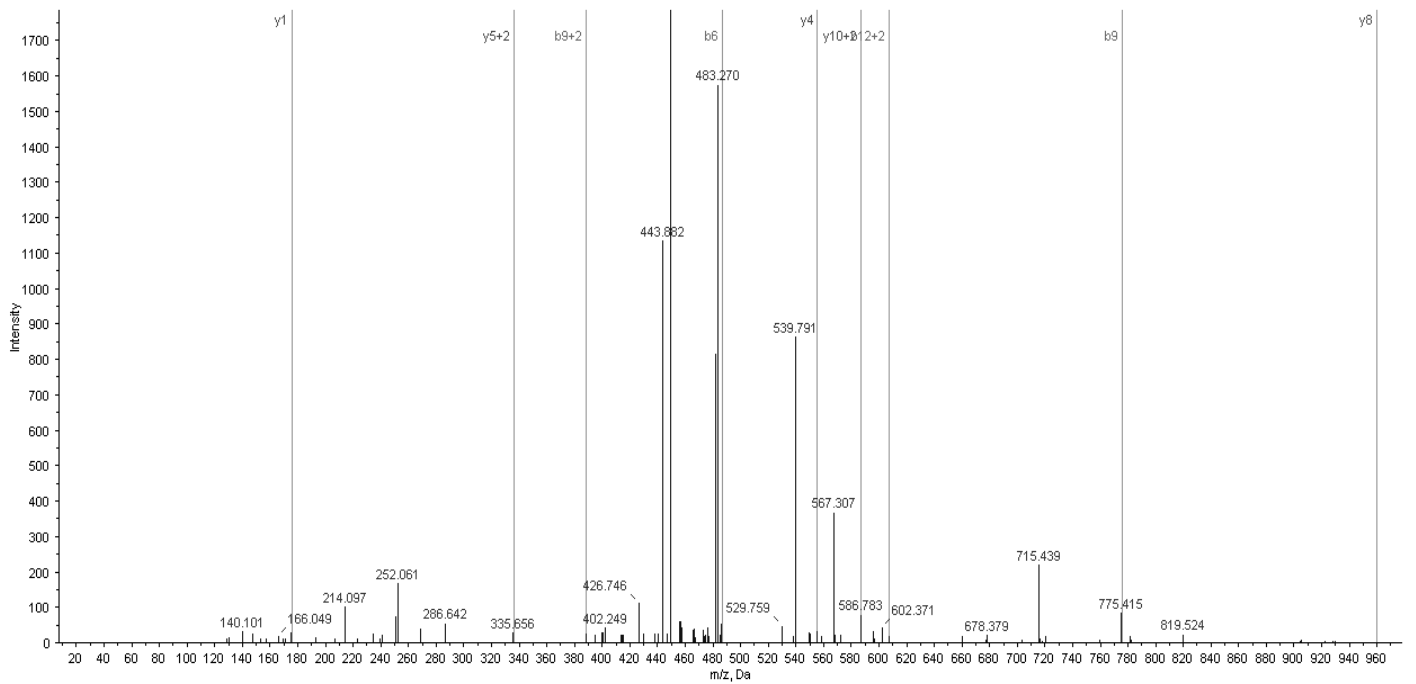


Name: SACE\_5370

Peptide PPL: ASGGGRSTTDRSGR

Netphos Bac score: 0.601

Netphos V2.0 score: 0.986

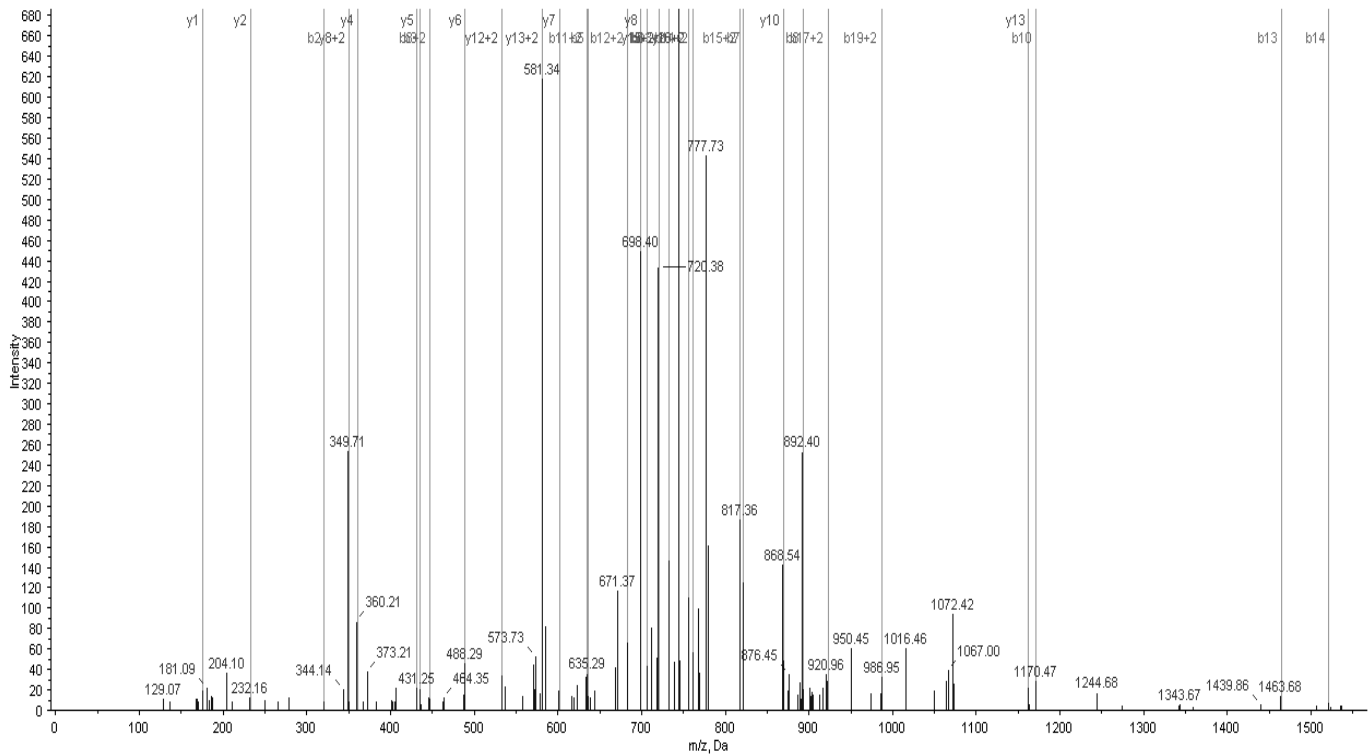


Name: SACE\_5822

Peptide PPL: RYDAEADAP**T**PPVGLPLGAGAGR

Netphos Bac score: 0.210

Netphos V2.0 score: 0.153

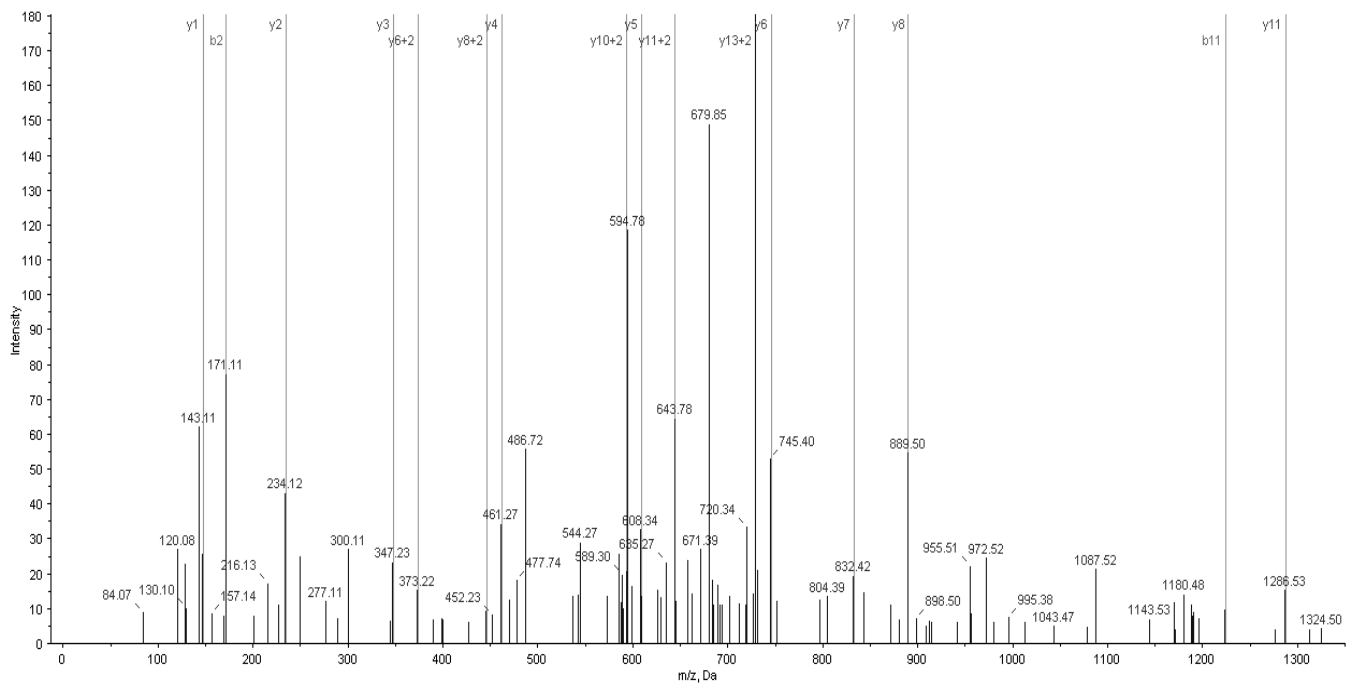


Name: SACE\_5832

Peptide PPL: AVTD**T**GSHFNLSK

Netphos Bac score: 0.315

Netphos V2.0 score: 0.140

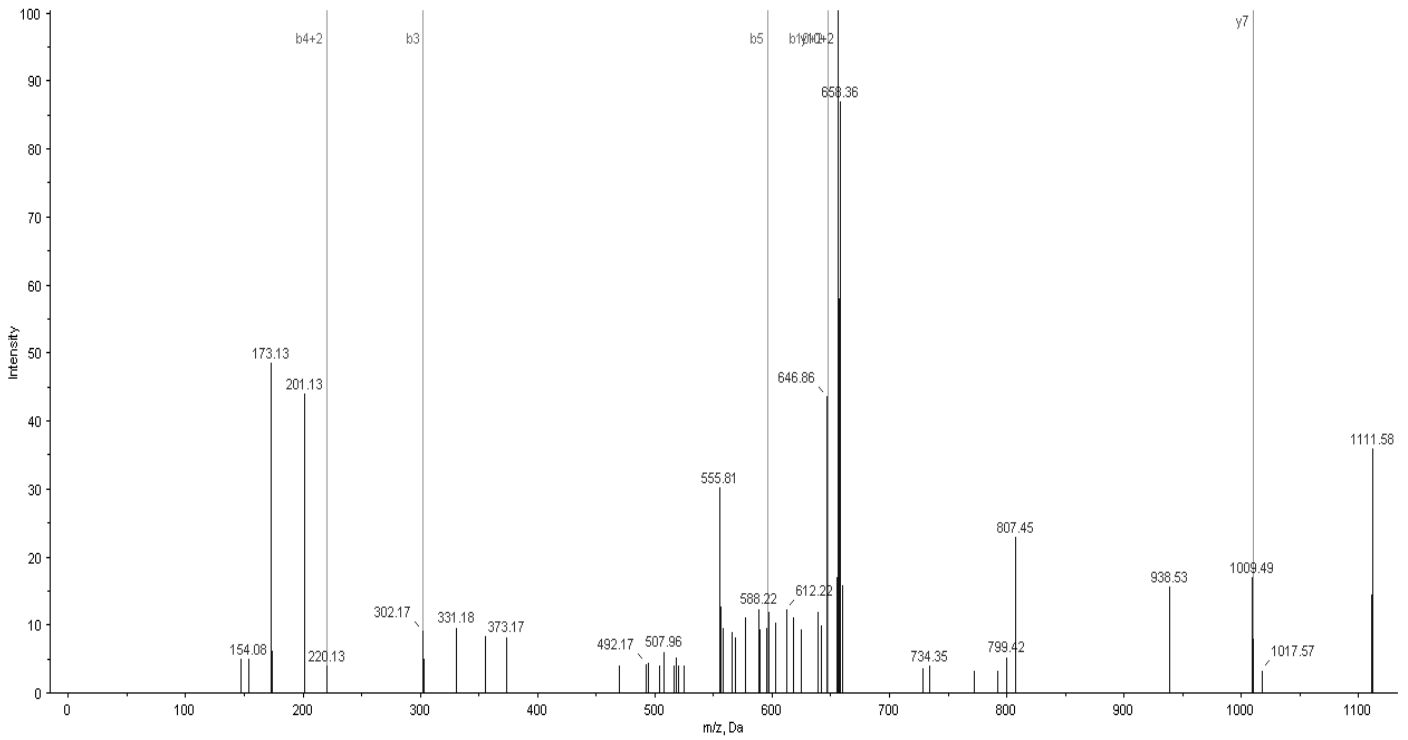


Name: SACE\_6254

Peptide PPL: TTVHRRFASR

Netphos Bac score: 0.602

Netphos V2.0 score: 0.939

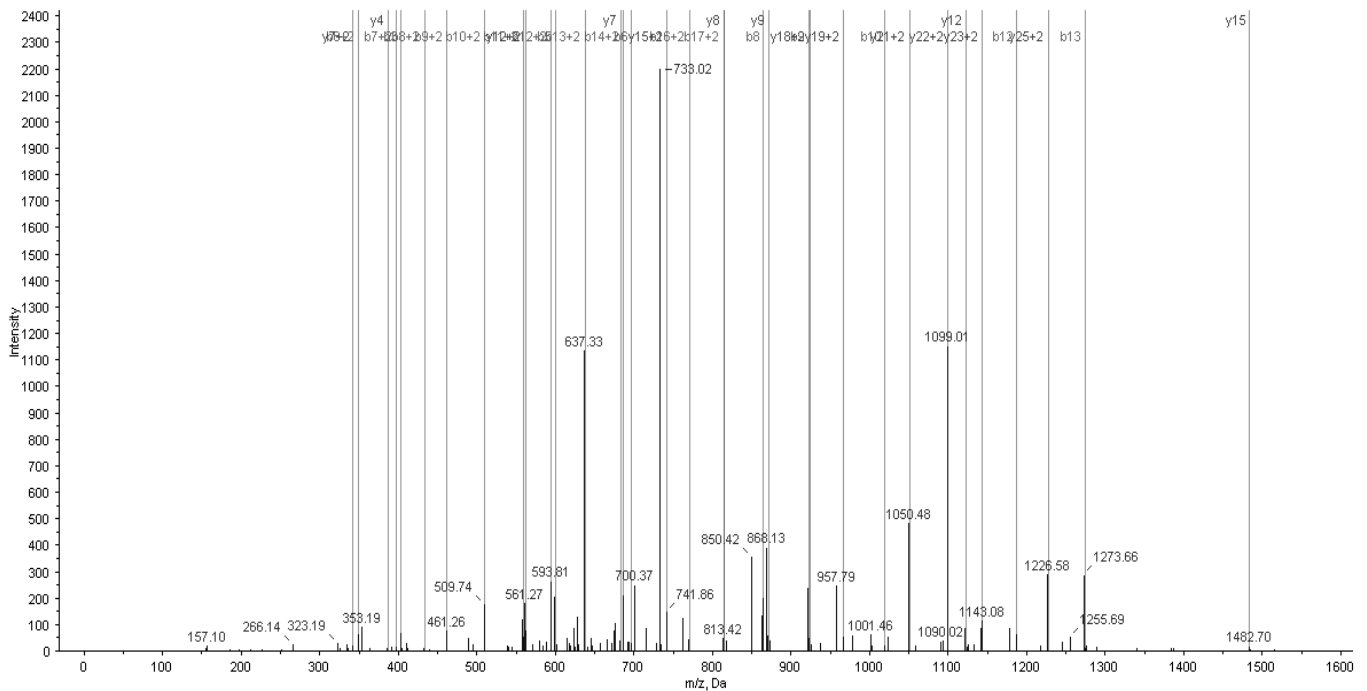


Name: SACE\_6654

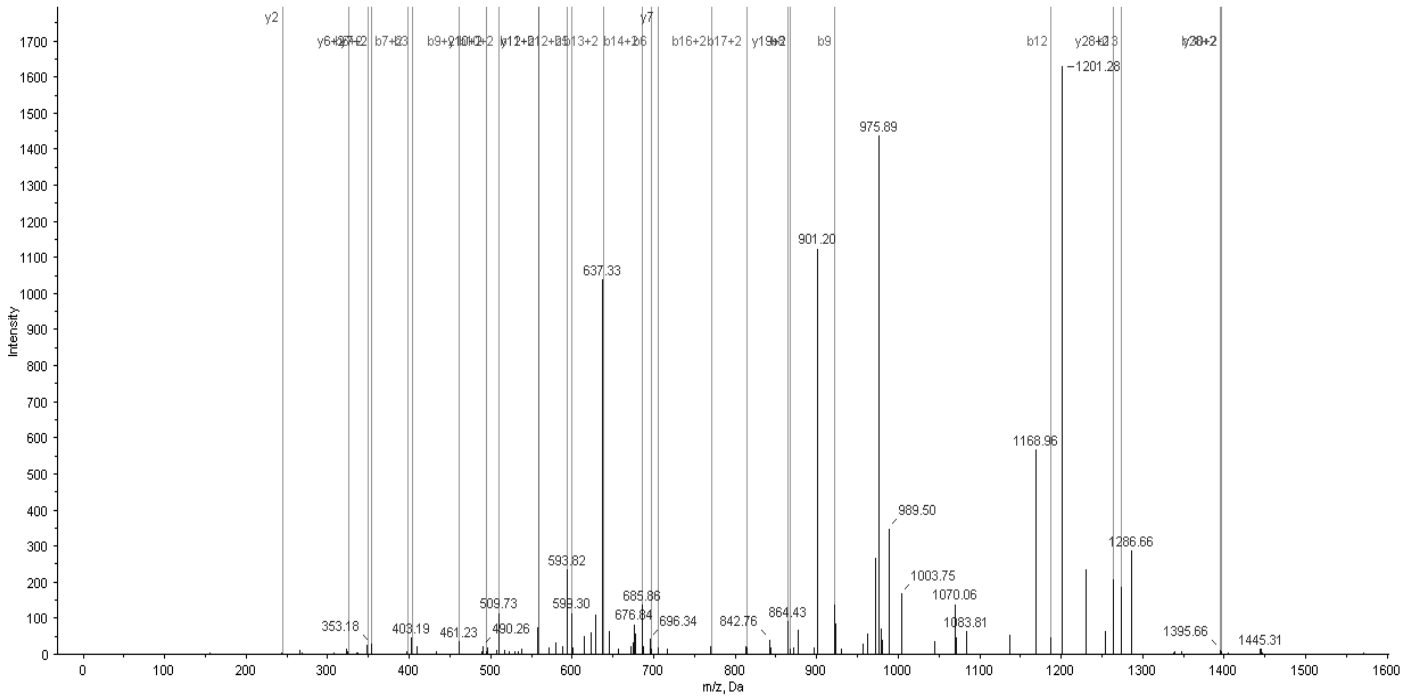
Peptide PPL: MDRPVPPAGPPASPPASQHPSPPPGGMPAQGGPR

Netphos Bac score: 0.467

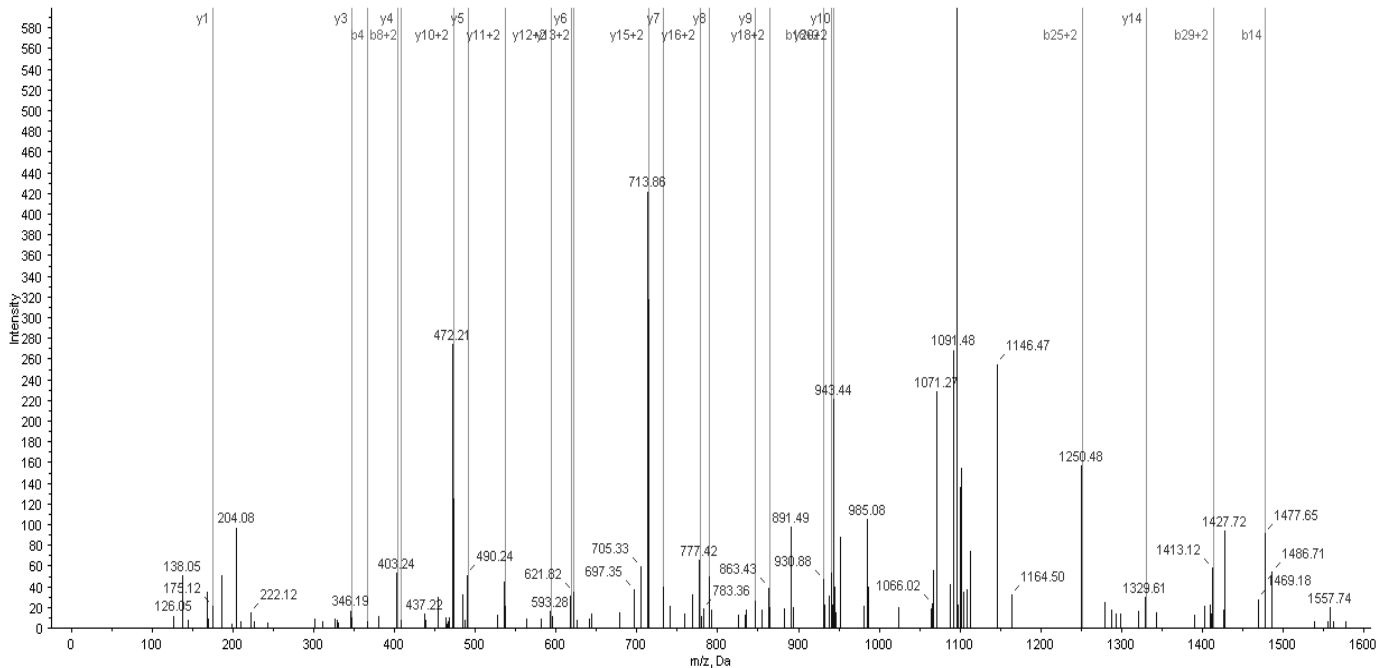
Netphos V2.0 score: 0.974



Peptide PPL: MDRPVPPAGPPASPPASPQHPP**S**PPGGMPAQGGPRPGGPAGPGQGPPPLPK  
 Netphos Bac score: 0.467  
 Netphos V2.0 score: 0.974



**Name:** SACE\_6667  
 Prptide: PGGPGQ**S**NP**S**GN**T**GPQPSVGGNQPGGNQP**S**GNQP**S**GGNR  
 Netphos Bac score: 0.385  
 Netphos V2.0 score: 0.025  
 Netphos Bac score: 0.243  
 Netphos V2.0 score: 0.109

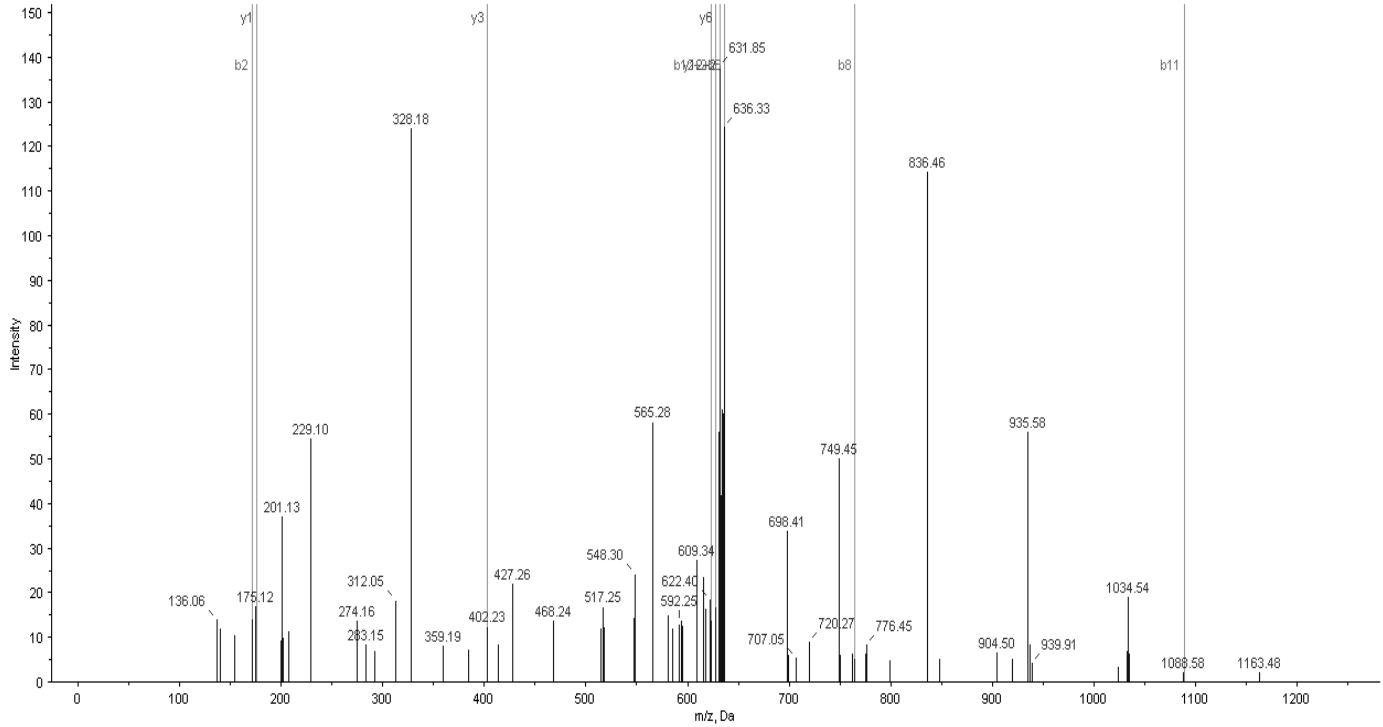


Name: SACE\_6713

Peptide PPL: GLKLSGAGPRAR

Netphos Bac score: 0.266

Netphos V2.0 score: 0.580



Name: SACE\_6793

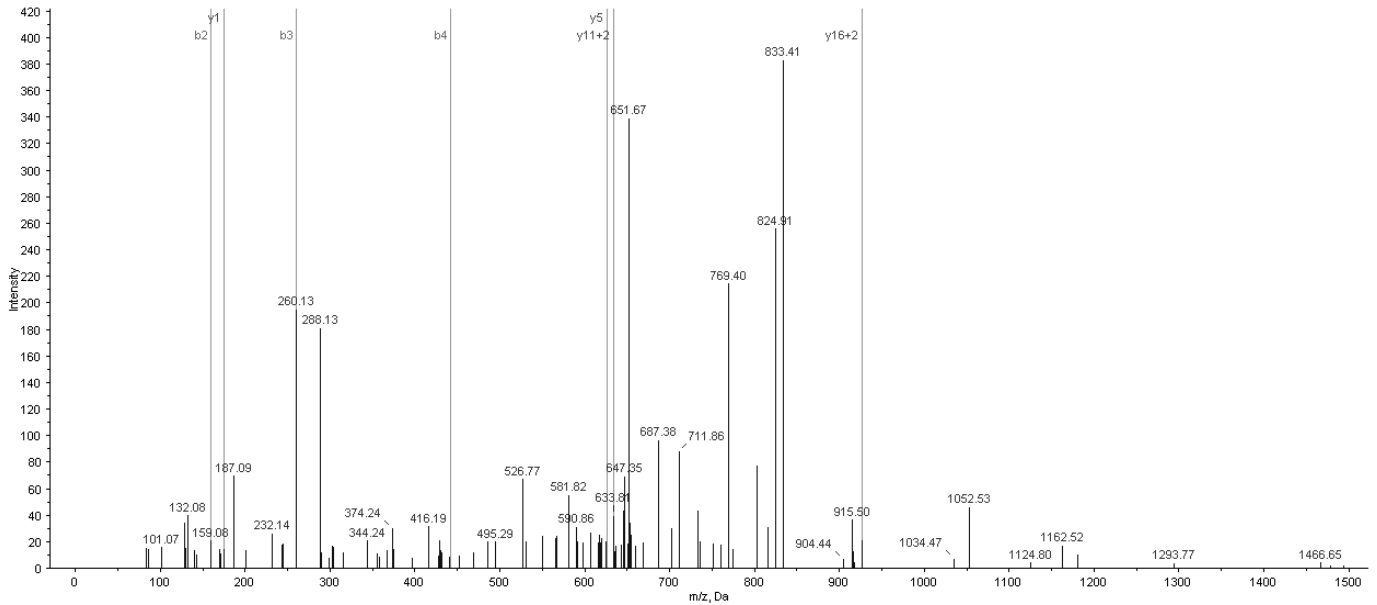
Peptide PPL: TGTTVFSRVTVVAPTIR

Netphos Bac score: 0.245

Netphos V2.0 score: 0.234

Netphos Bac score: 0.342

Netphos V2.0 score: 0.532

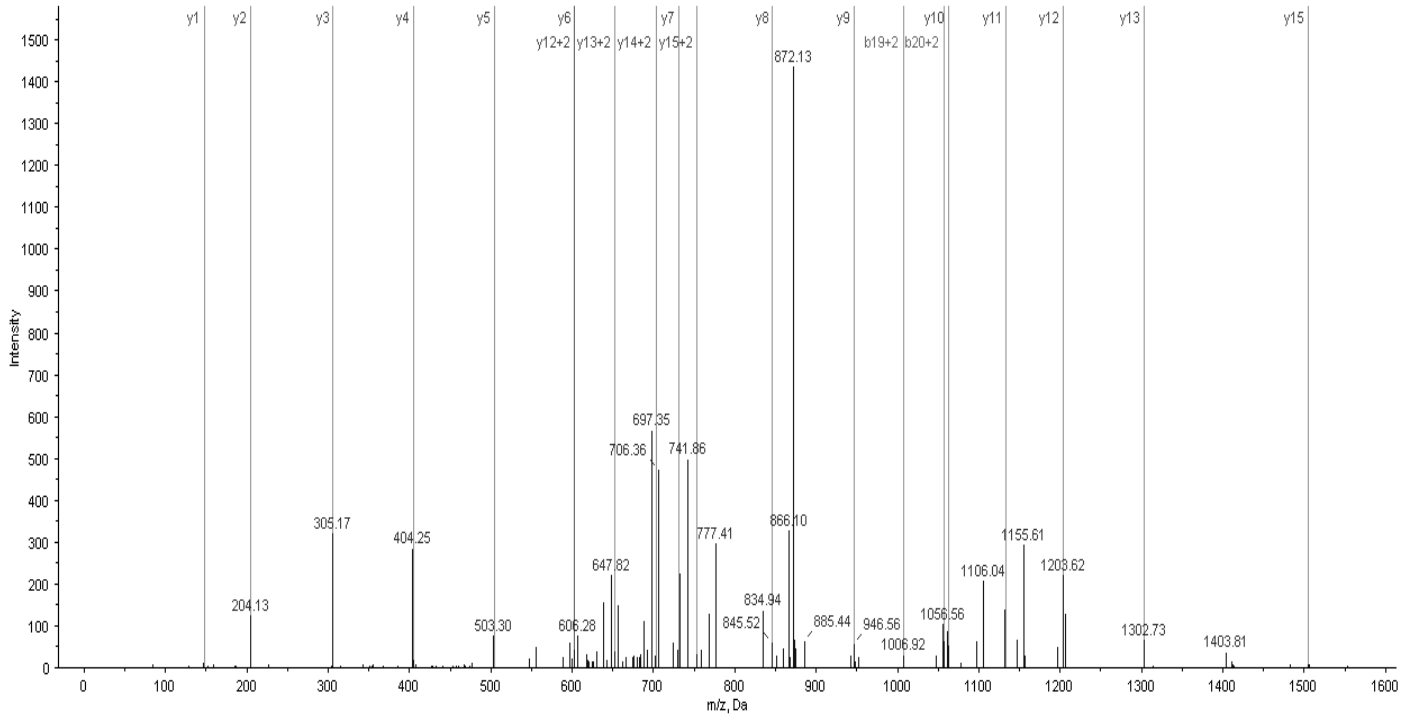


Name: SACE\_7107

Peptide PPL: NGCGAPQQGTTTVAADTDQVVVTGK

Netphos Bac score: 0.131

Netphos V2.0 score: 0.419

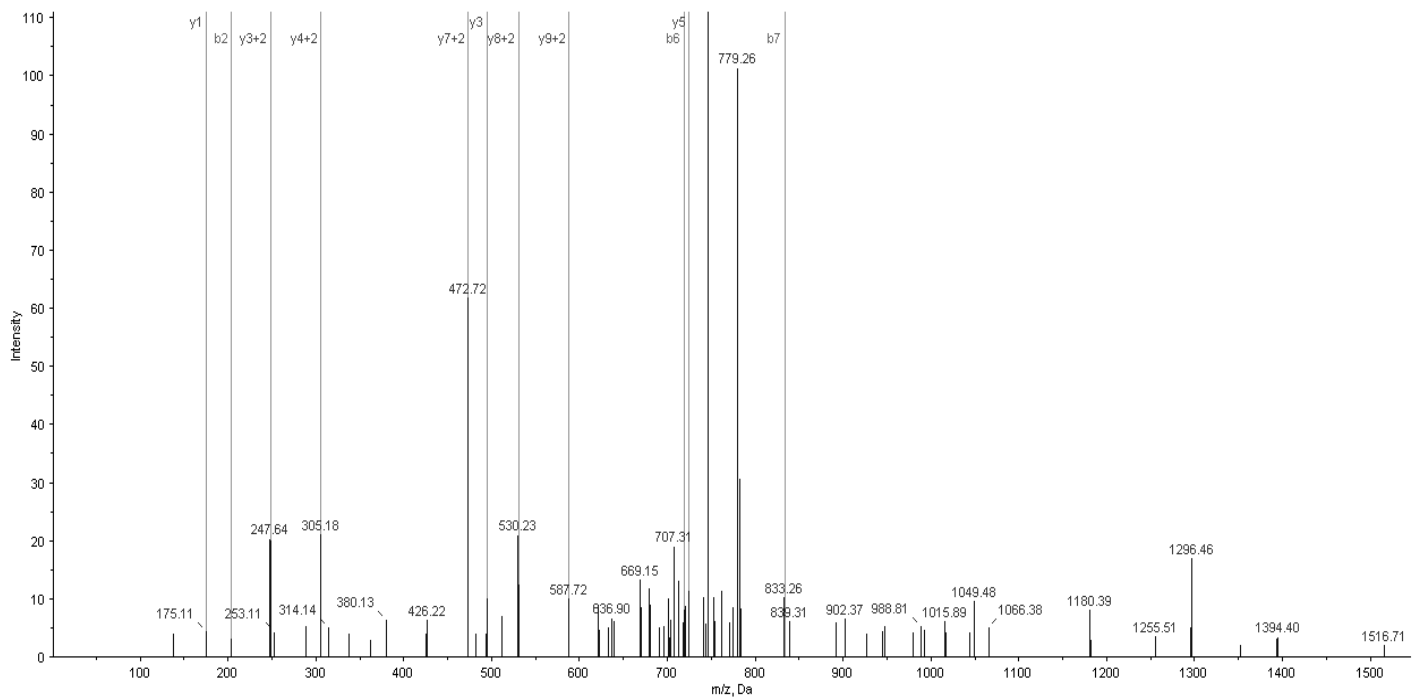


Name: SACE\_7119

Peptide PPL: SDEDRDDSYDDGYDDYRR

Netphos Bac score: 0.317

Netphos V2.0 score: 0.998



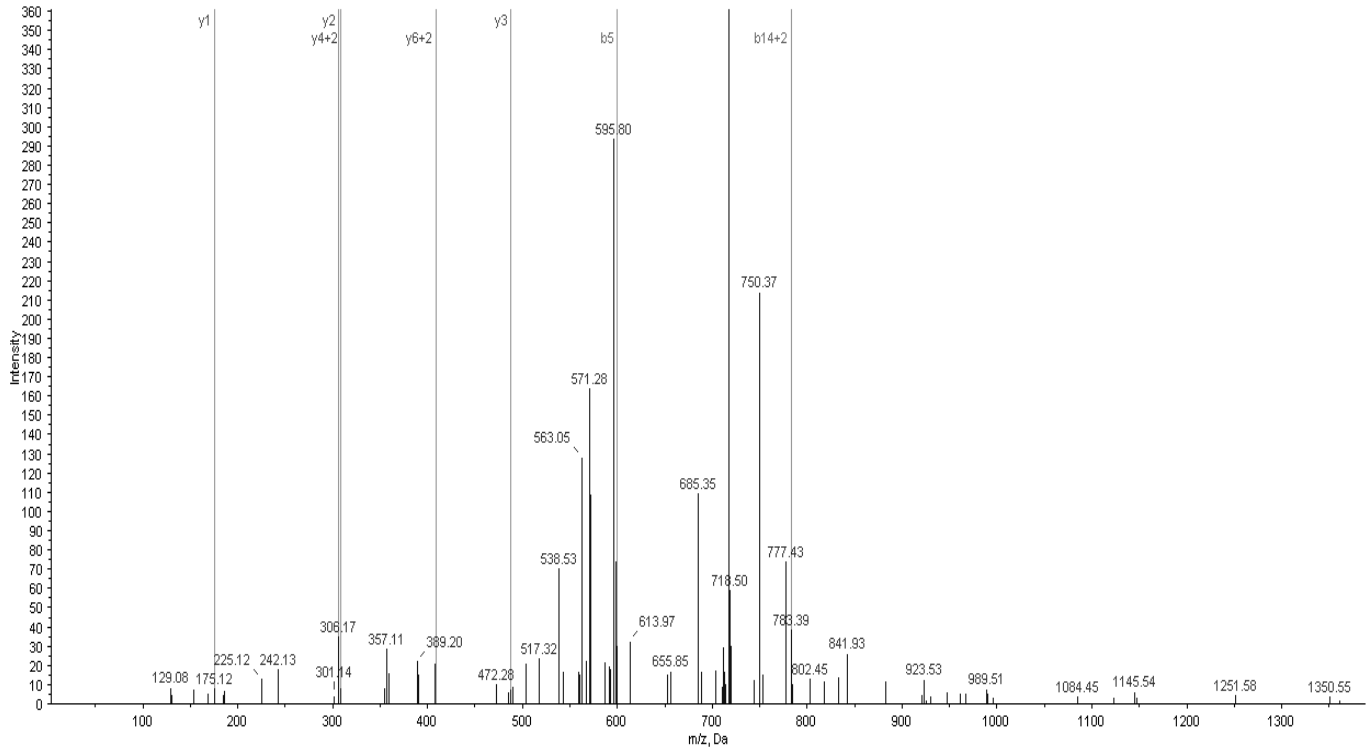


Name: SACE\_7320

Peptide PPL: MPVDRPTPSRPESDAEK TMR

Netphos Bac score: 0.192

Netphos V2.0 score: 0.930

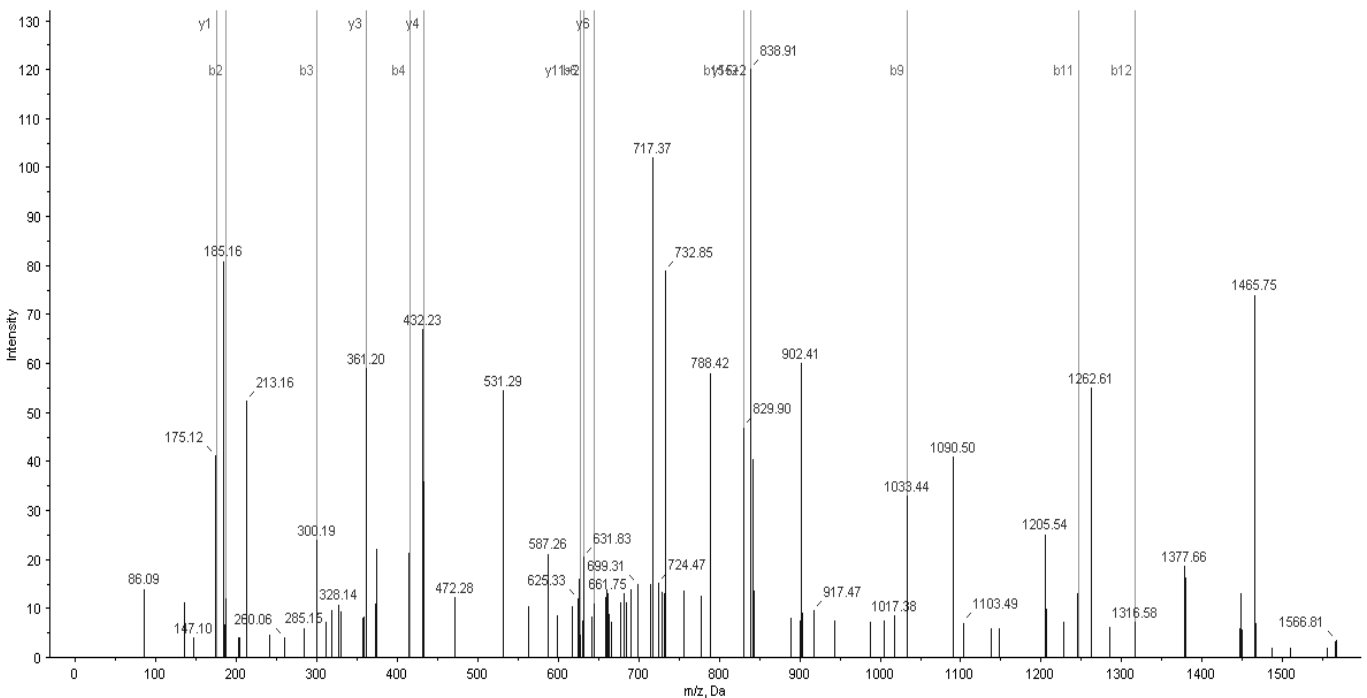


Name: SACE\_6385

Peptide PPL: SVIDDPTQPDPASVR

Netphos Bac score: 0.426

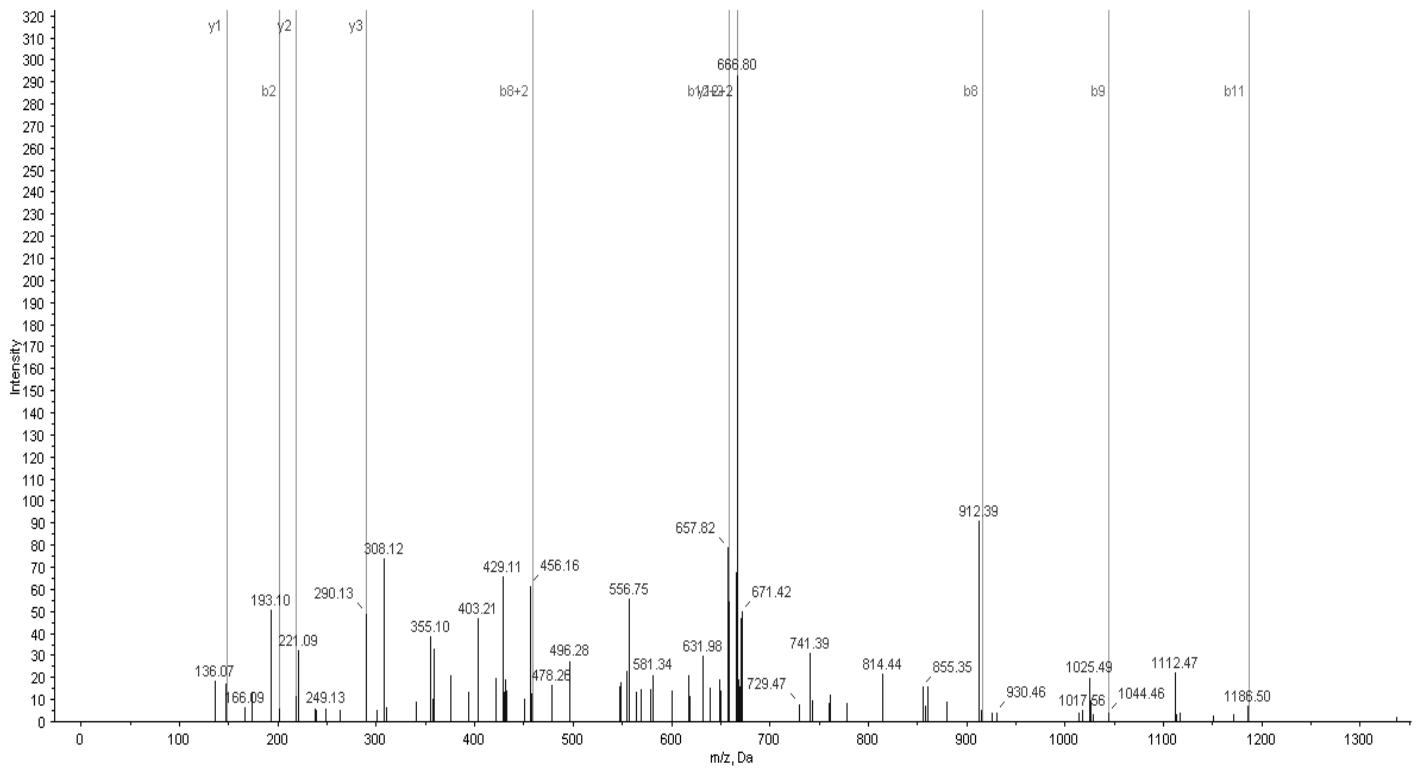
Netphos V2.0 score: 0.086



Peptide PPL: AEPKPS**P**QEAAK

Netphos Bac score: 0.249

Netphos V2.0 score: 0.992

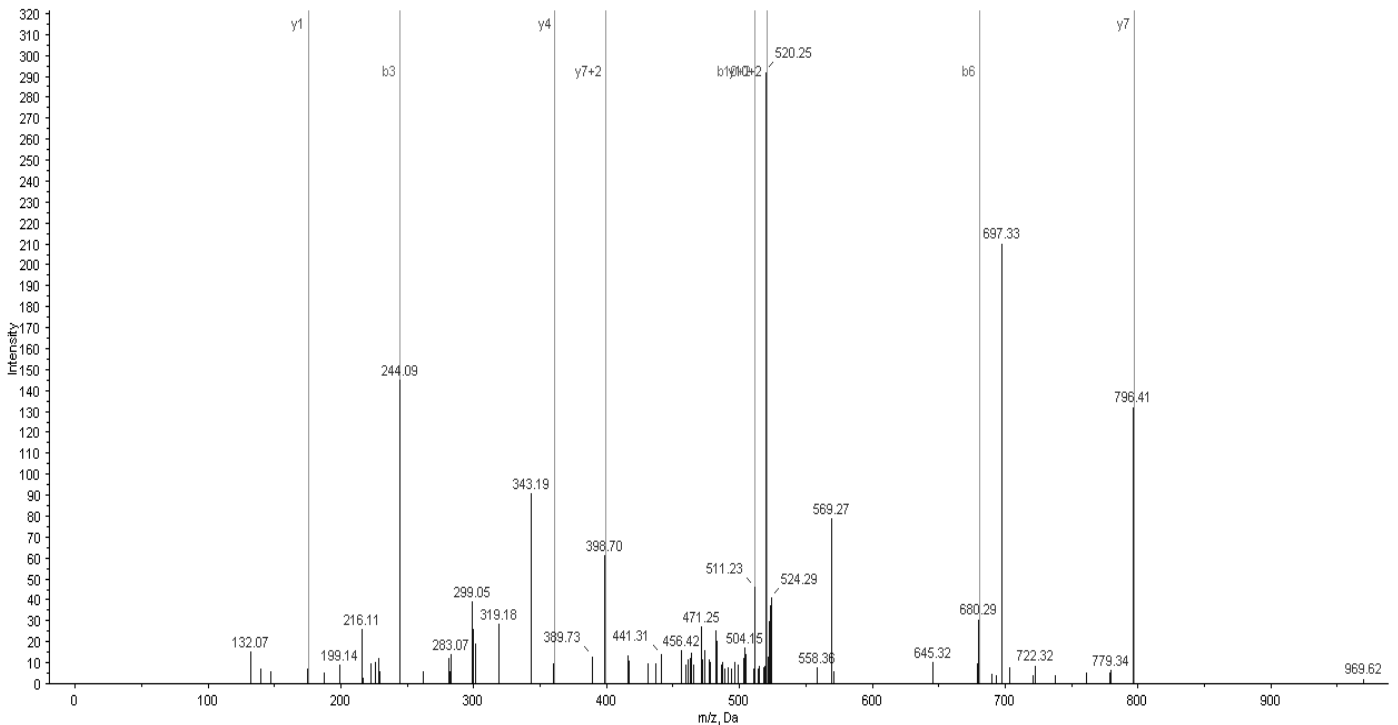


Name: **SACE\_6838**

Peptide PPL: EGGR**T**VGAGR

Netphos Bac score: 0.748

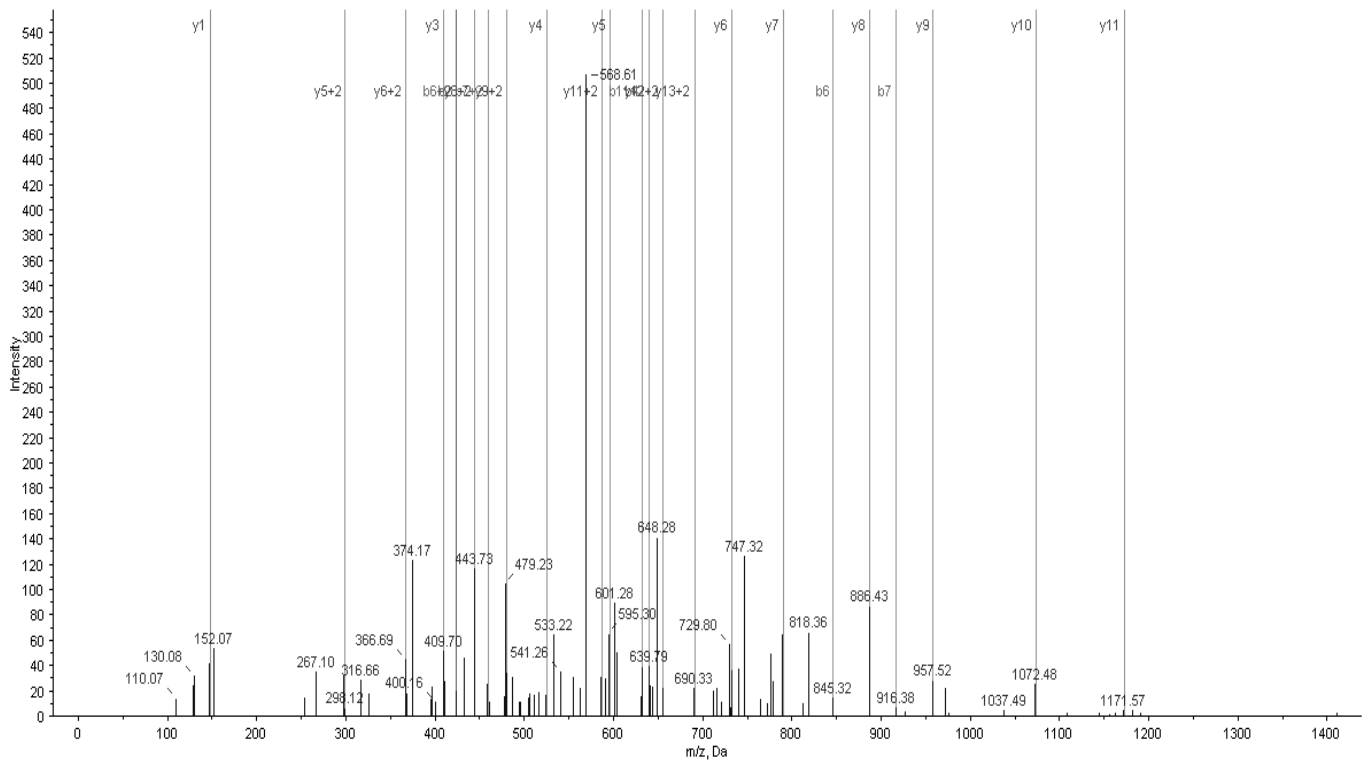
Netphos V2.0 score: 0.068



Peptide PPL: **HY**AHVDAPGHADYVK

Netphos Bac score: not found

Netphos V2.0 score: 0.879

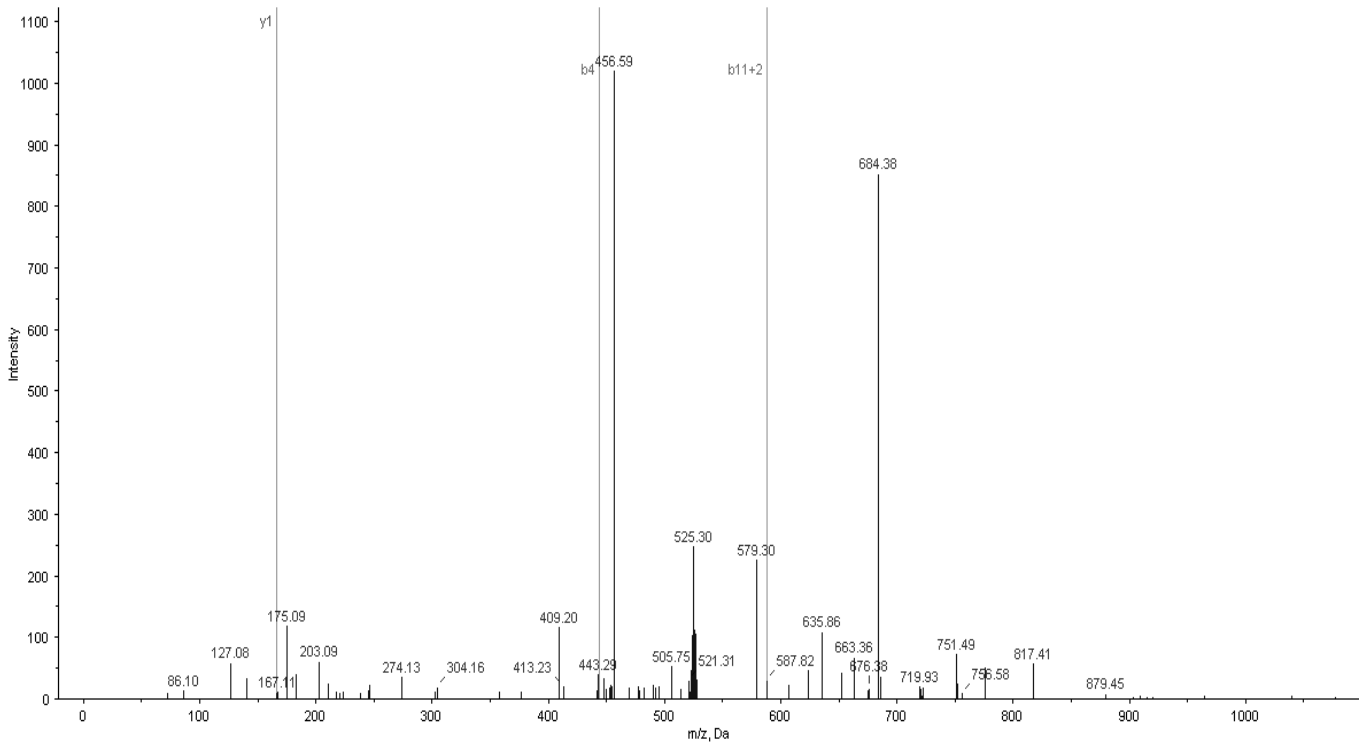


**Name:** **SACE\_6282**

Peptide: RTGKVL**S**VPVGDDF

Netphos Bac score: 0.597

Netphos V2.0 score: 0.809

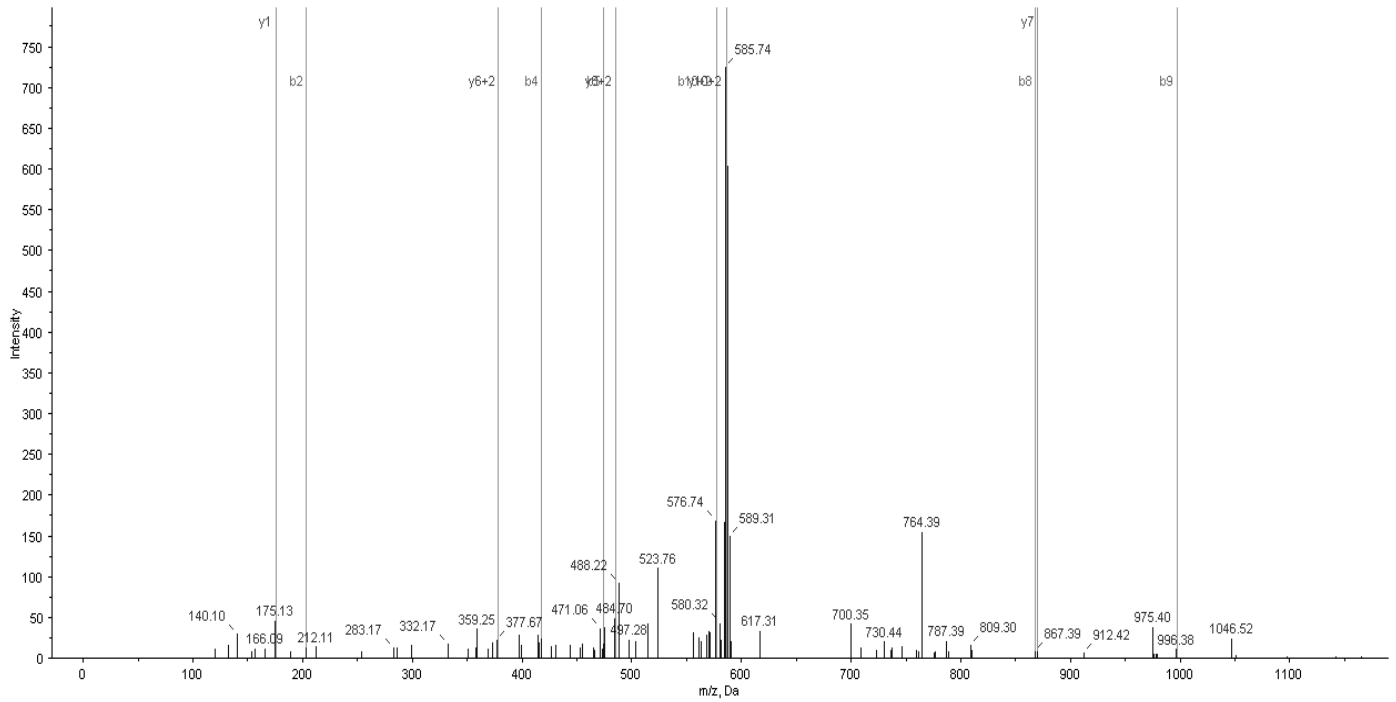


Name: SACE\_2177

Peptide PPL: SDVDGVITER

Netphos Bac score: 0.680

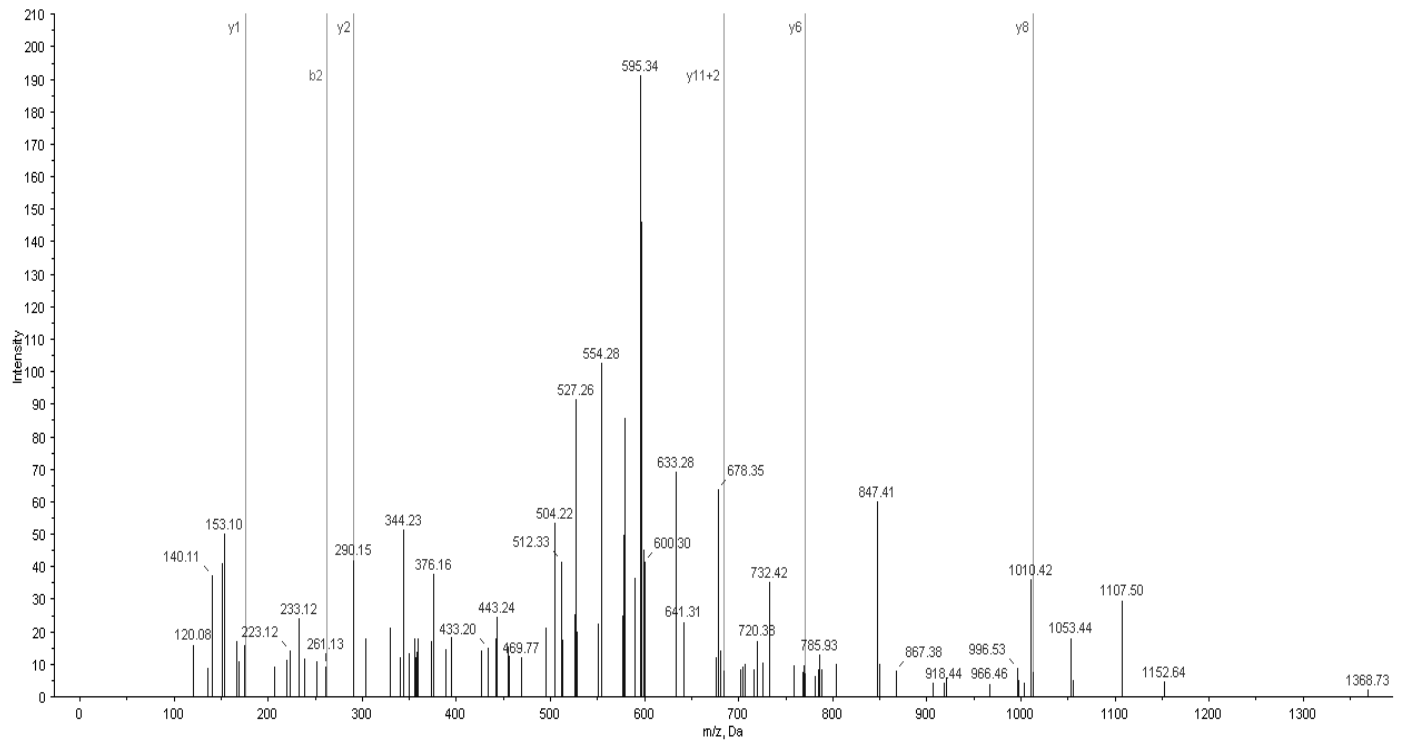
Netphos V2.0 score: 0.904



Peptide PPL: FITGGSMIEMVHIDR

Netphos Bac score: 0.390

Netphos V2.0 score: 0.844



Name: SACE\_1473

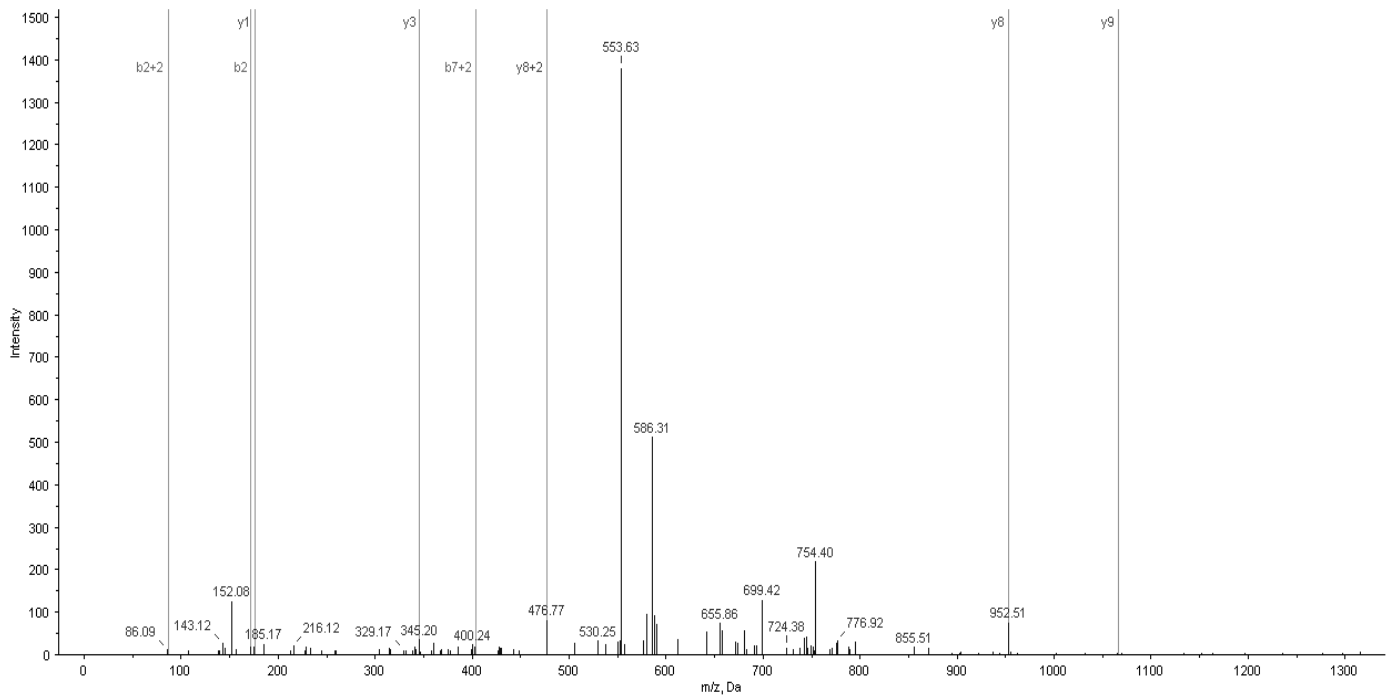
Peptide PPL: GLQ**T**PDLS**L**LLVDGLR

Netphos Bac score: 0.384

Netphos V2.0 score: 0.953

Netphos Bac score: 0.254

Netphos V2.0 score: 0.009

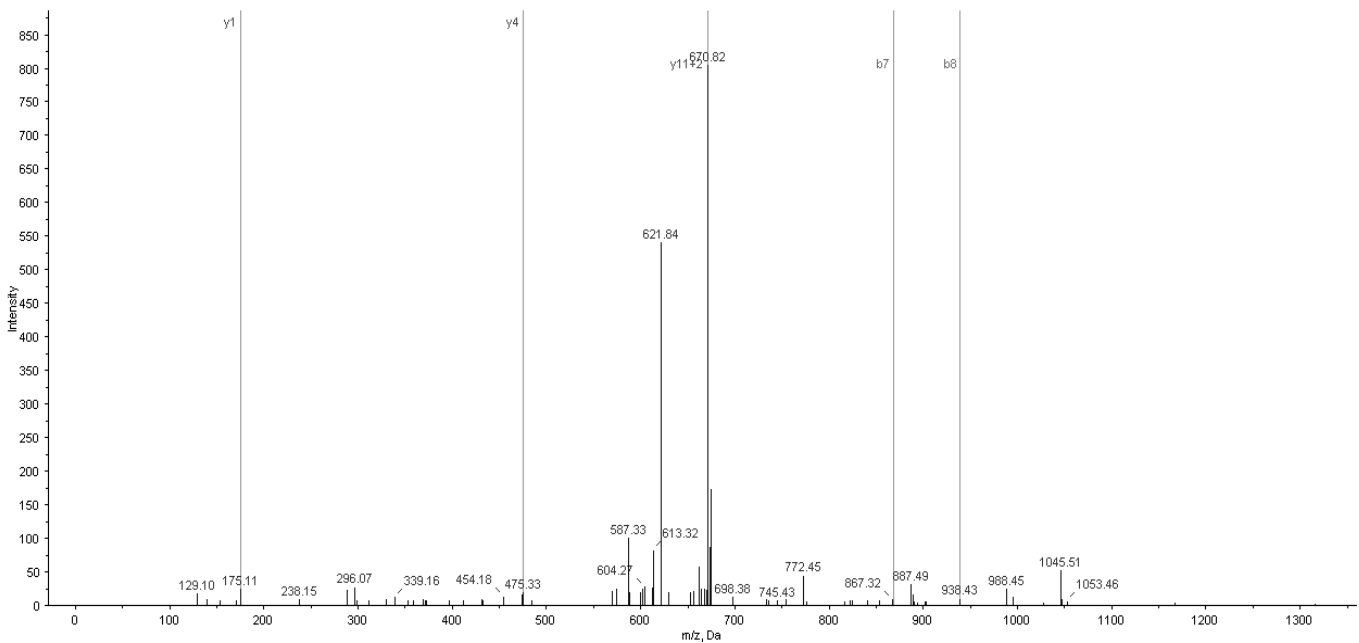


Name: **SACE\_3842**

Peptide: EL**S**DKDVALDR

Netphos Bac score: 0.461

Netphos V2.0 score: 0.996



**Name: SACE\_0302**

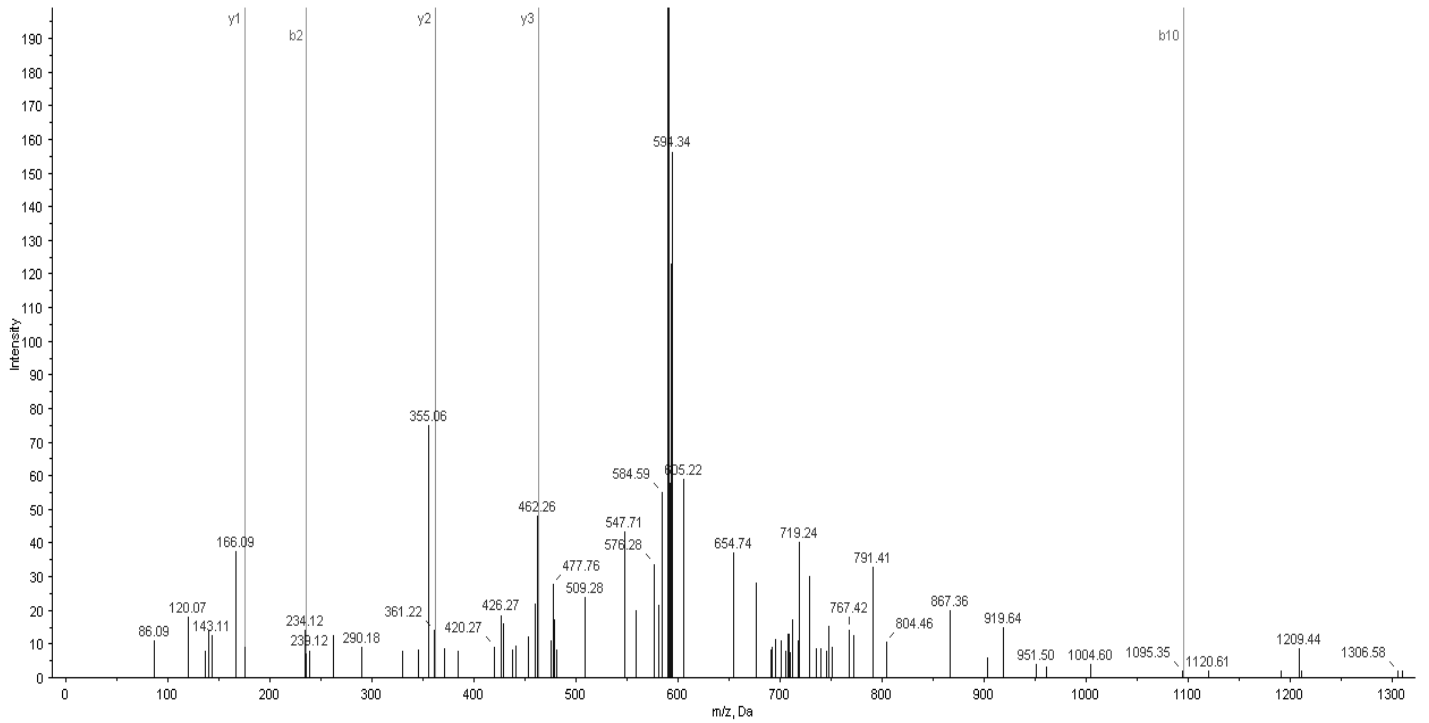
Peptide PPL: FSSVAGELGSPDTWR

Netphos Bac score: 0.579

Netphos V2.0 score: 0.141

Netphos Bac score: 0.302

Netphos V2.0 score: 0.170

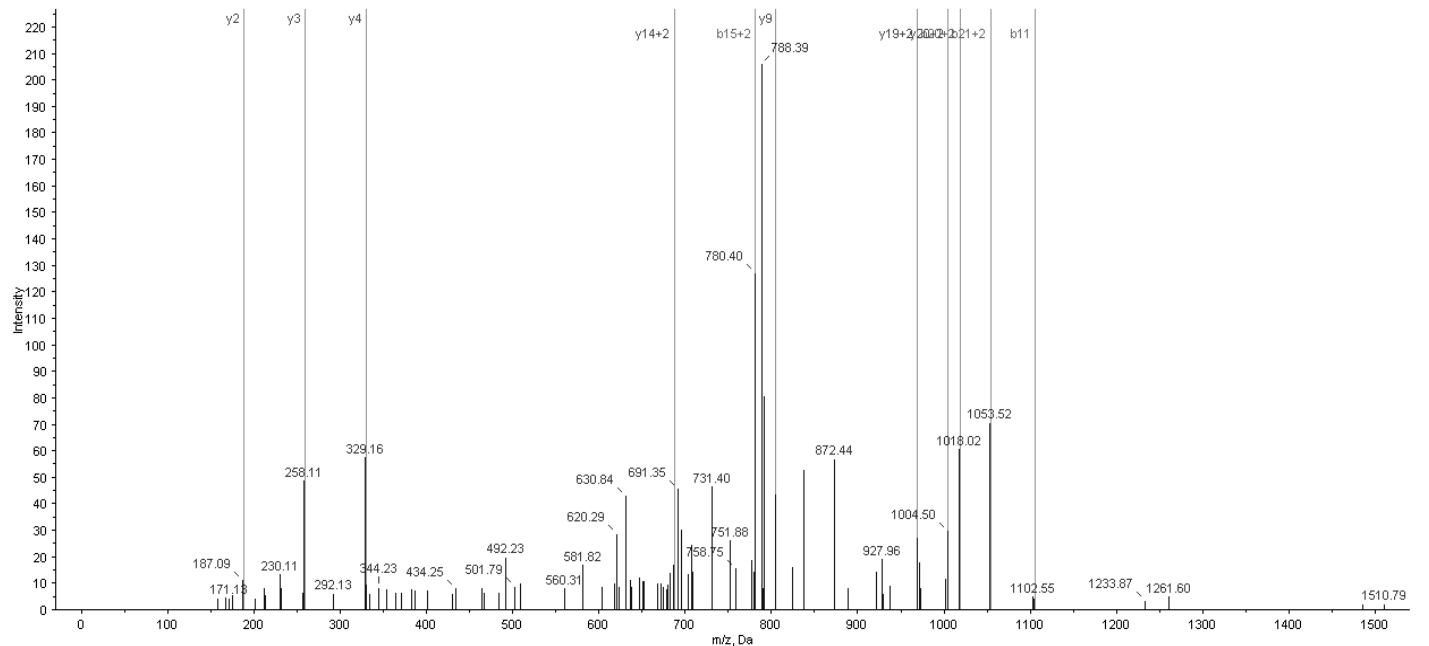


**Name: SACE\_2103**

Peptide: NAVAAGLASRIEVQVAYAIGAAAP

Netphos Bac score: 0.466

Netphos V2.0 score: 0.117

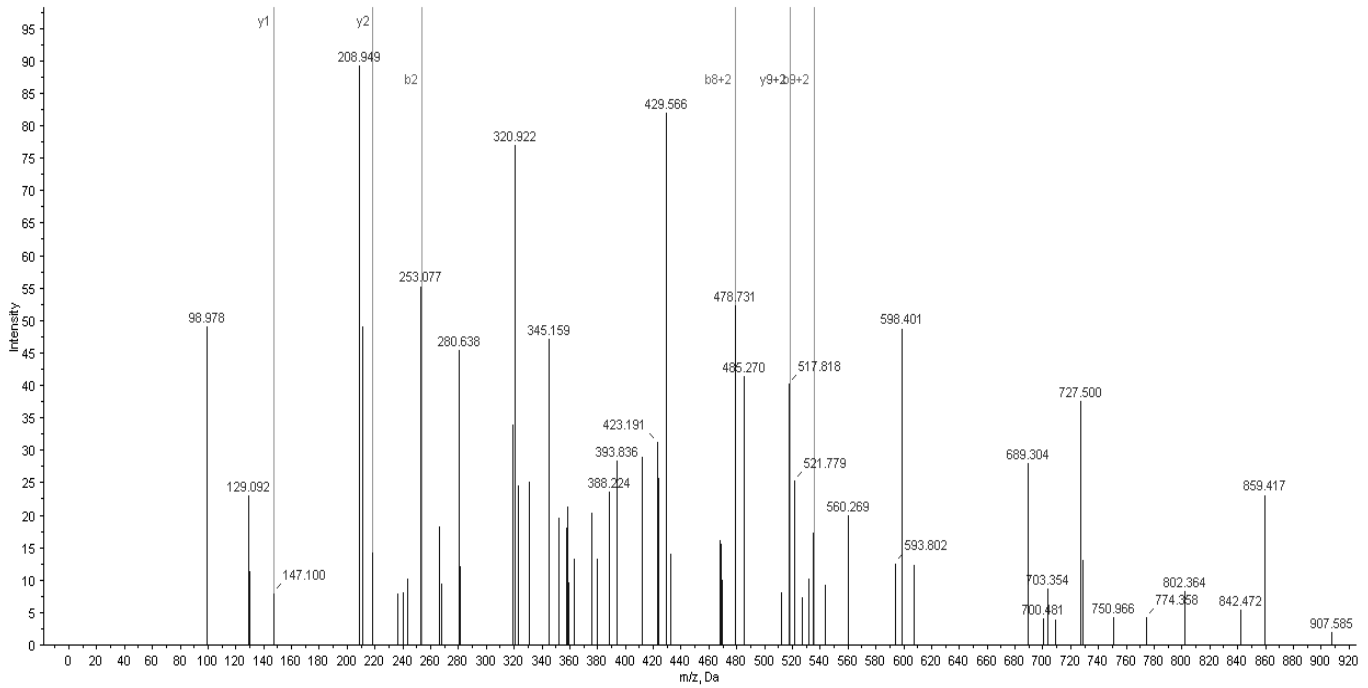


Name: SACE\_0033

Peptide PPL: ATGMSRKQLAK

Netphos Bac score: 0.178

Netphos V2.0 score: 0.193

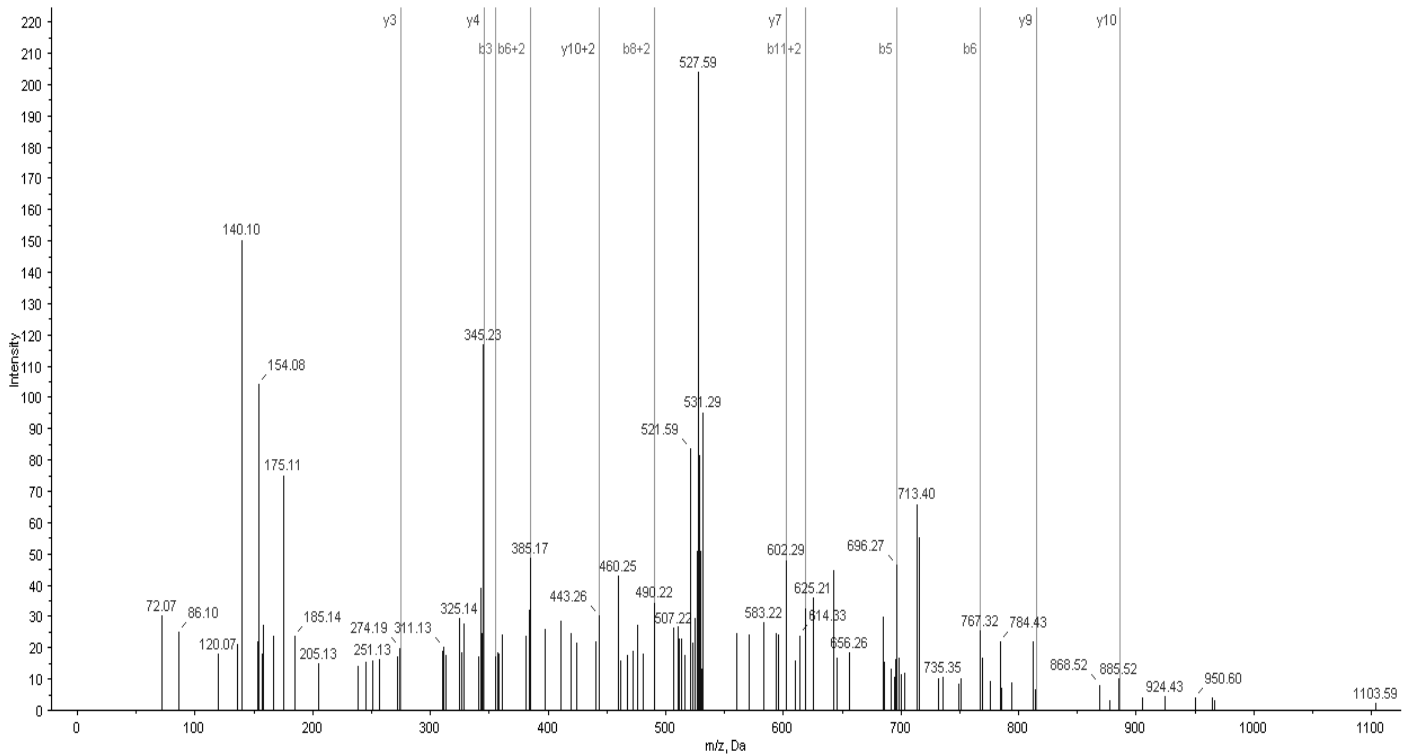


Name: SACE\_0453

Peptide PPL: PRTCALVGVTAAL

Netphos Bac score: 0.210

Netphos V2.0 score: 0.322

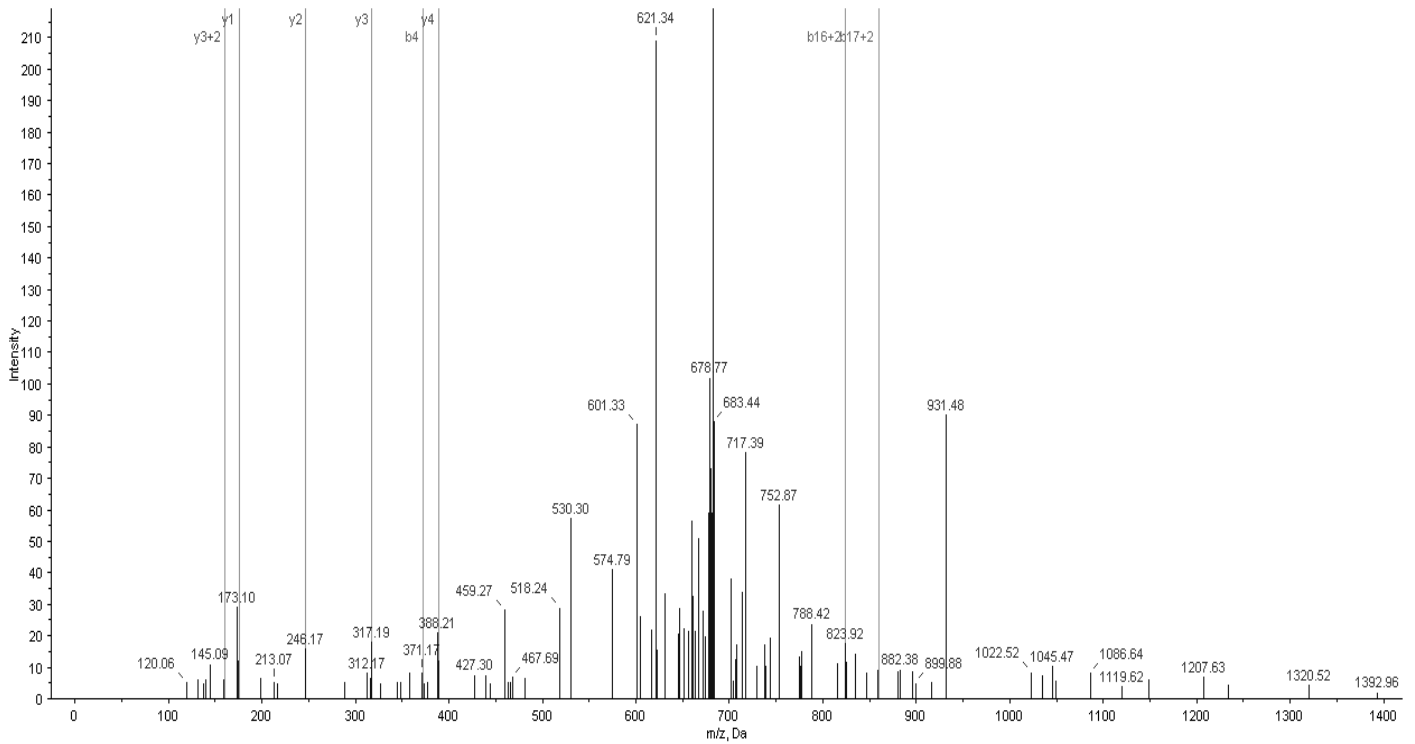


Name: SACE\_2279

Peptide PPL: AAVEAVRPGVTAESIDAAAR

Netphos Bac score: 0.353

Netphos V2.0 score: 0.048

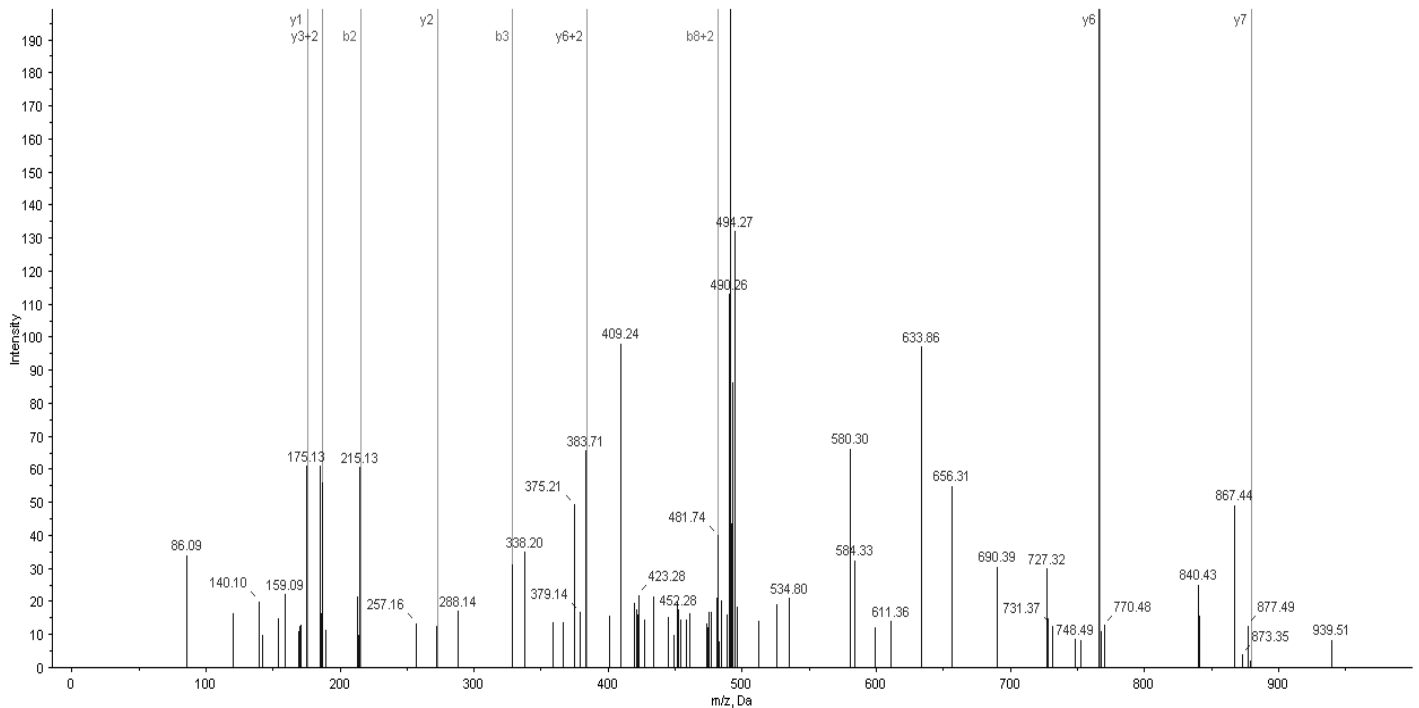


Name: SACE\_2671

Peptide PPL: TLLDSVPR

Netphos Bac score: 0.710

Netphos V2.0 score: 0.802



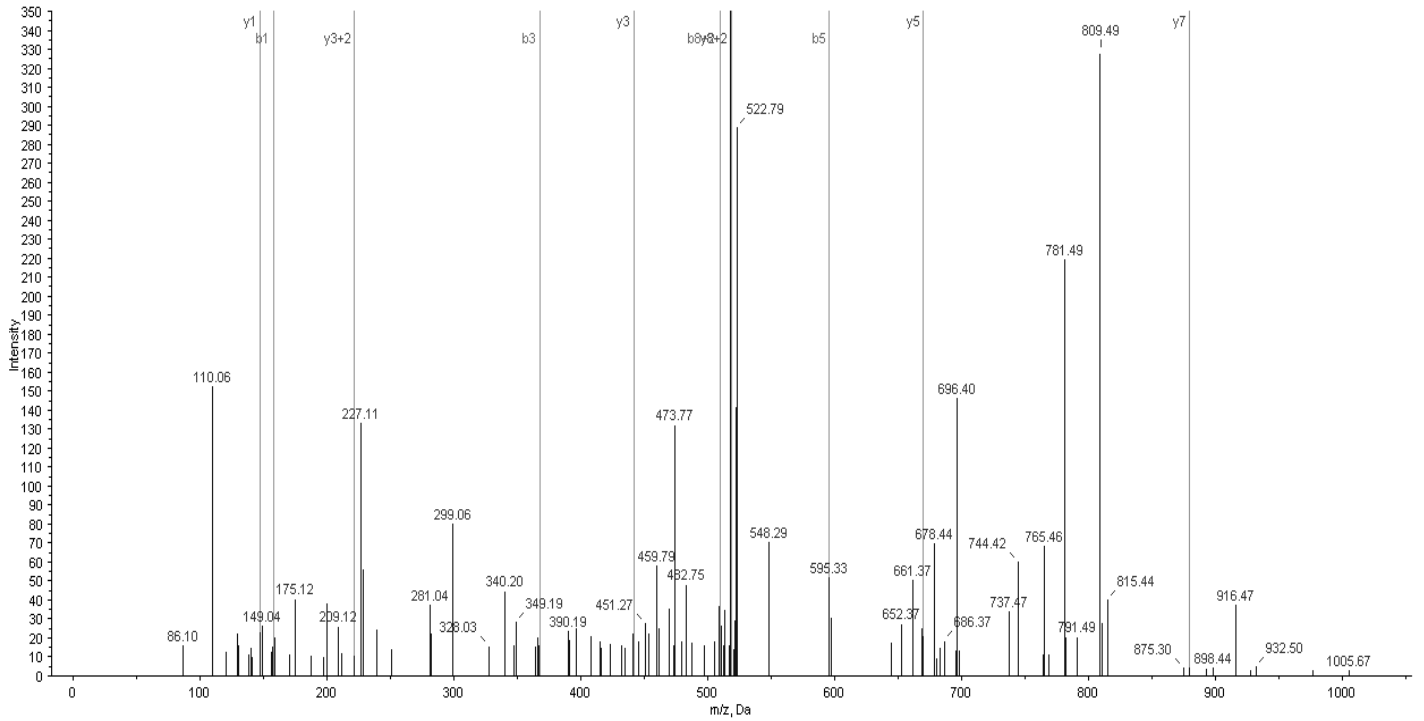


Name: SACE\_2969

Peptide PPL: RLPLDILK

Netphos Bac score: 0.354

Netphos V2.0 score: 0.739

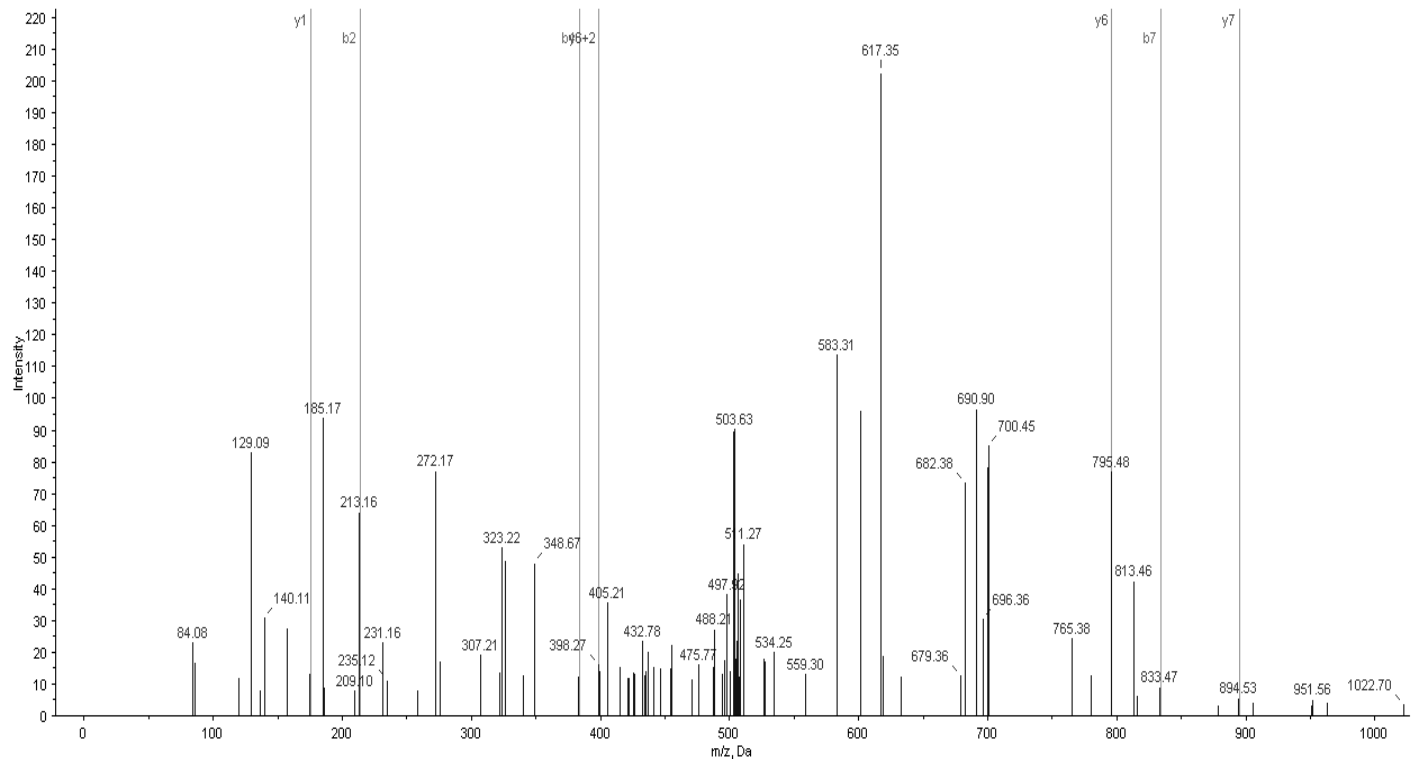


Name: SACE\_3064

Peptide PPL: LVAVLRTR

Netphos Bac score: 0.301

Netphos V2.0 score: 0.009

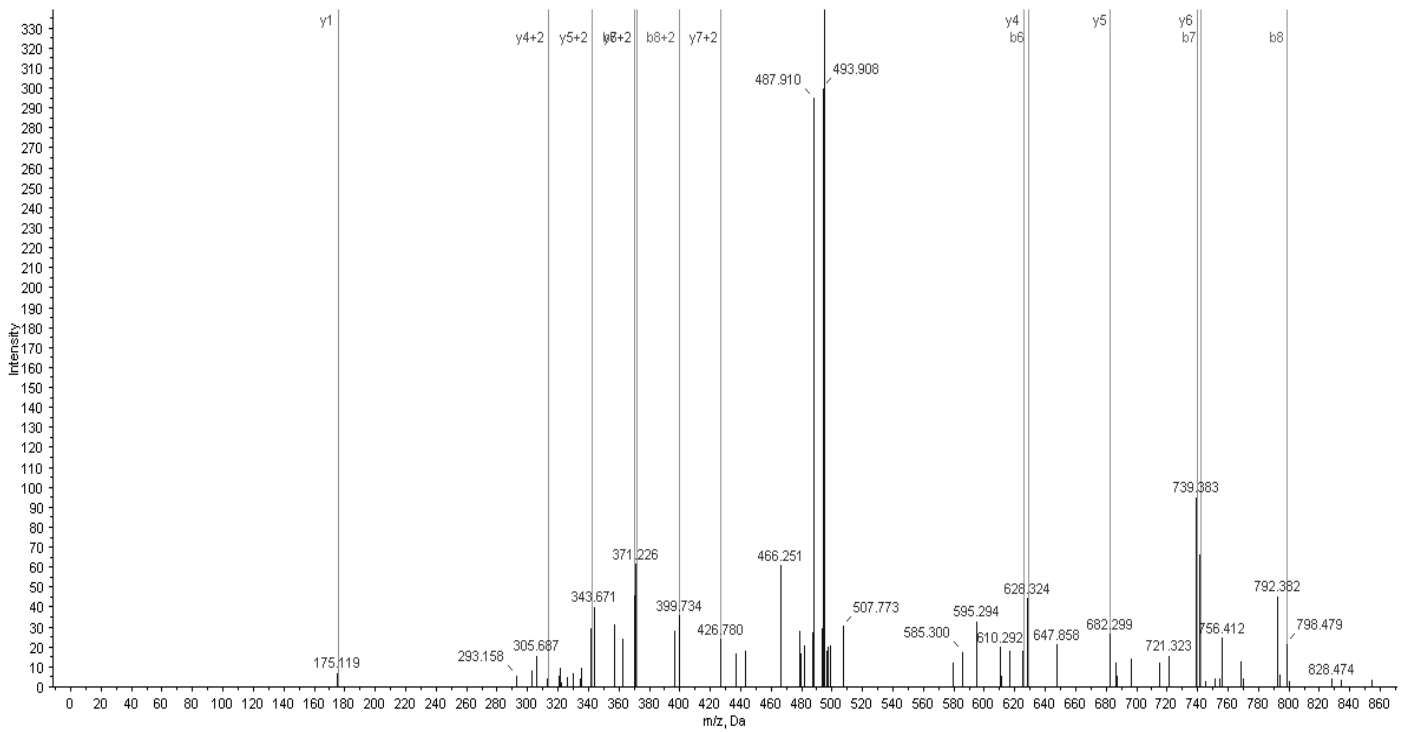


Name: SACE\_3282

Peptide PPL: EVGSVRLGGITRR

Netphos Bac score: 0.658

Netphos V2.0 score: 0.242

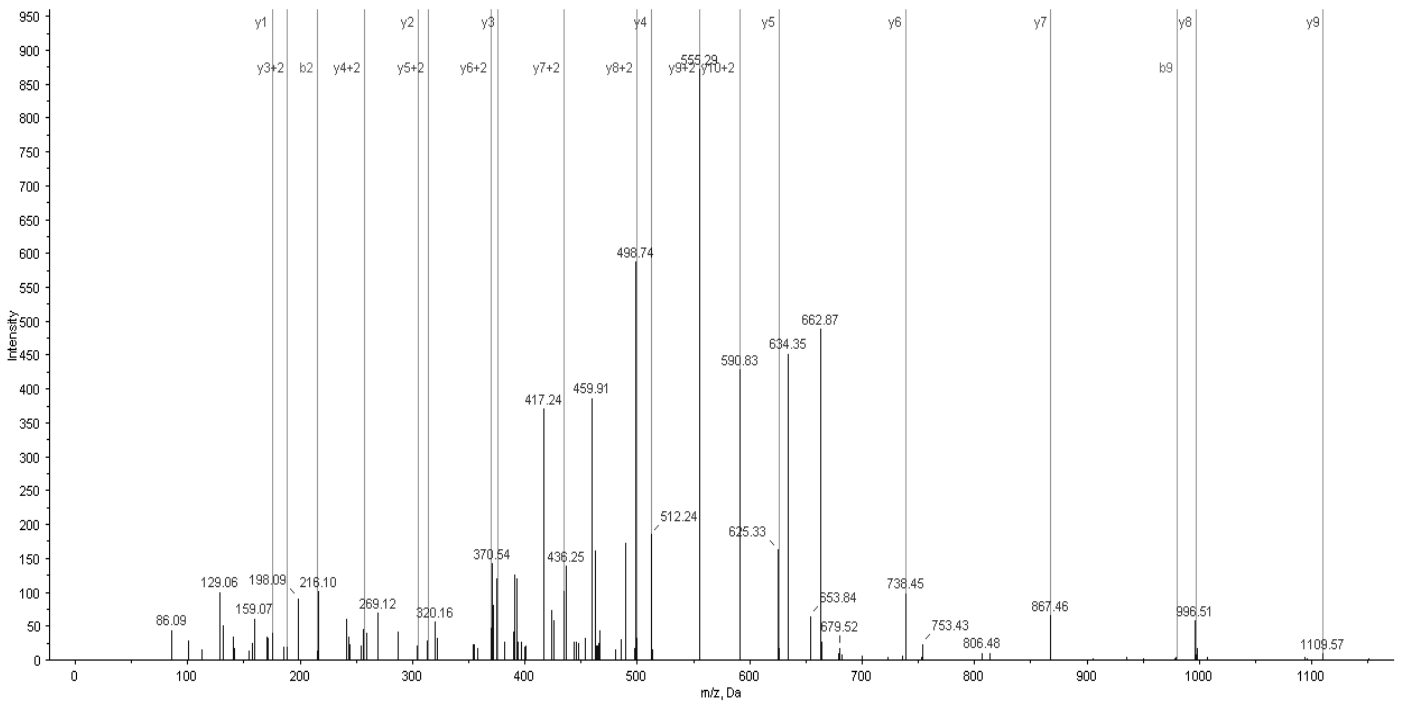


Name: SACE\_4061

Peptide PPL: VDRAGSAIEELLHAER

Netphos Bac score: 0.633

Netphos V2.0 score: 0.991

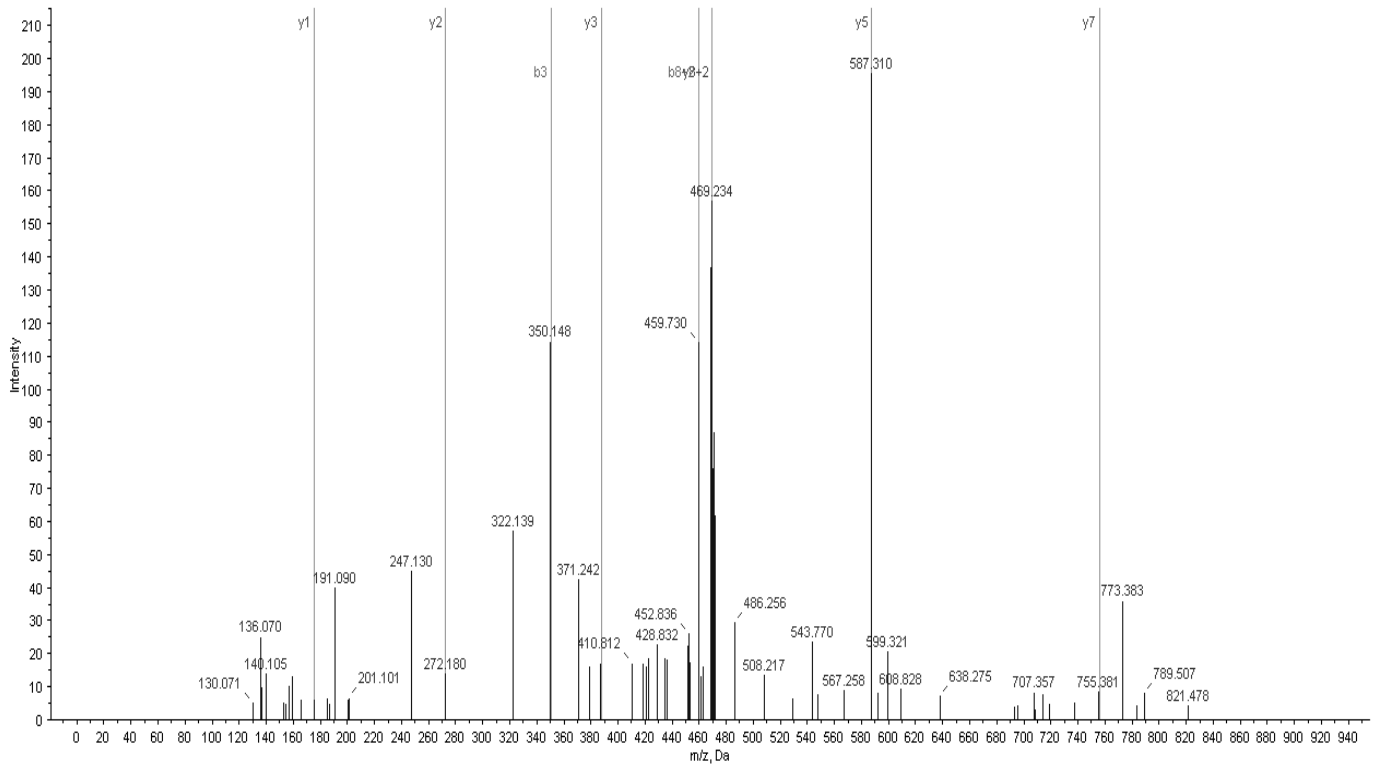


Name: SACE\_5439

Peptide PPL: TPAAEDPR

Netphos Bac score: 0.229

Netphos V2.0 score: 0.760

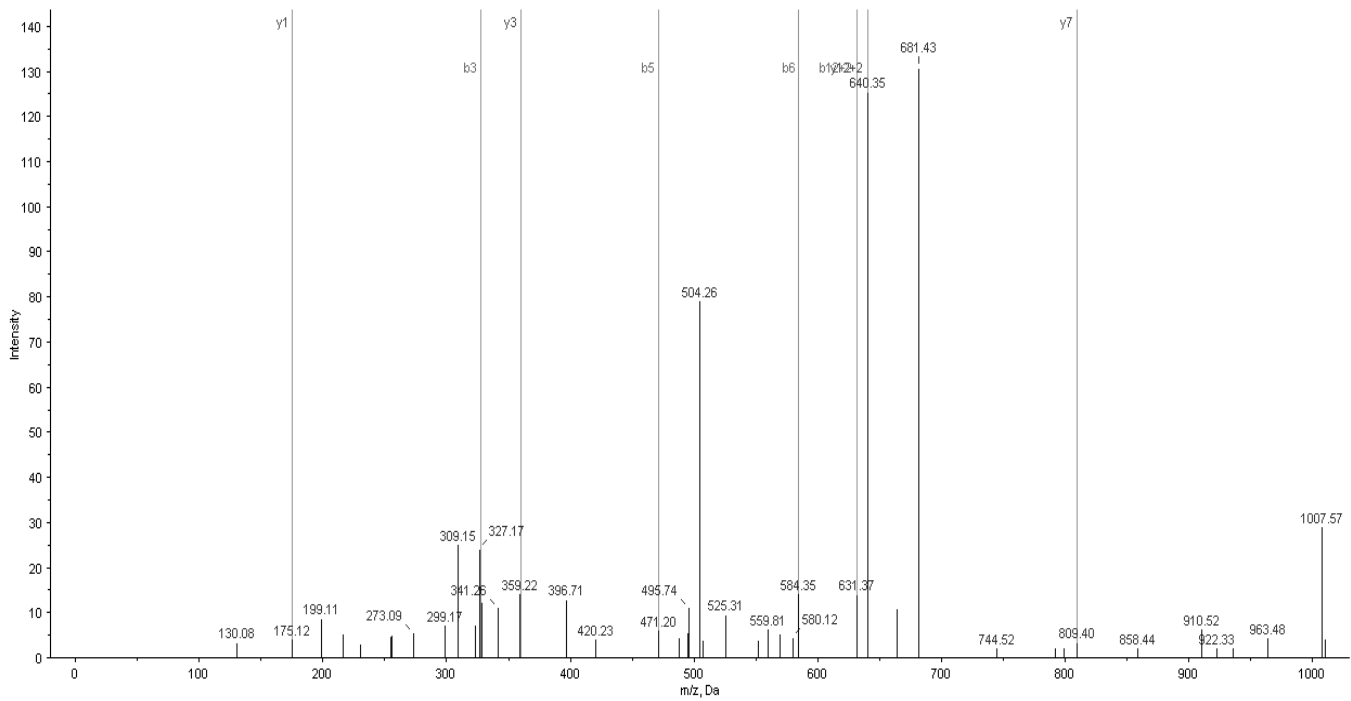


Name: SACE\_5483

Peptide PPL: LVNSGISLGAIR

Netphos Bac score: not determined

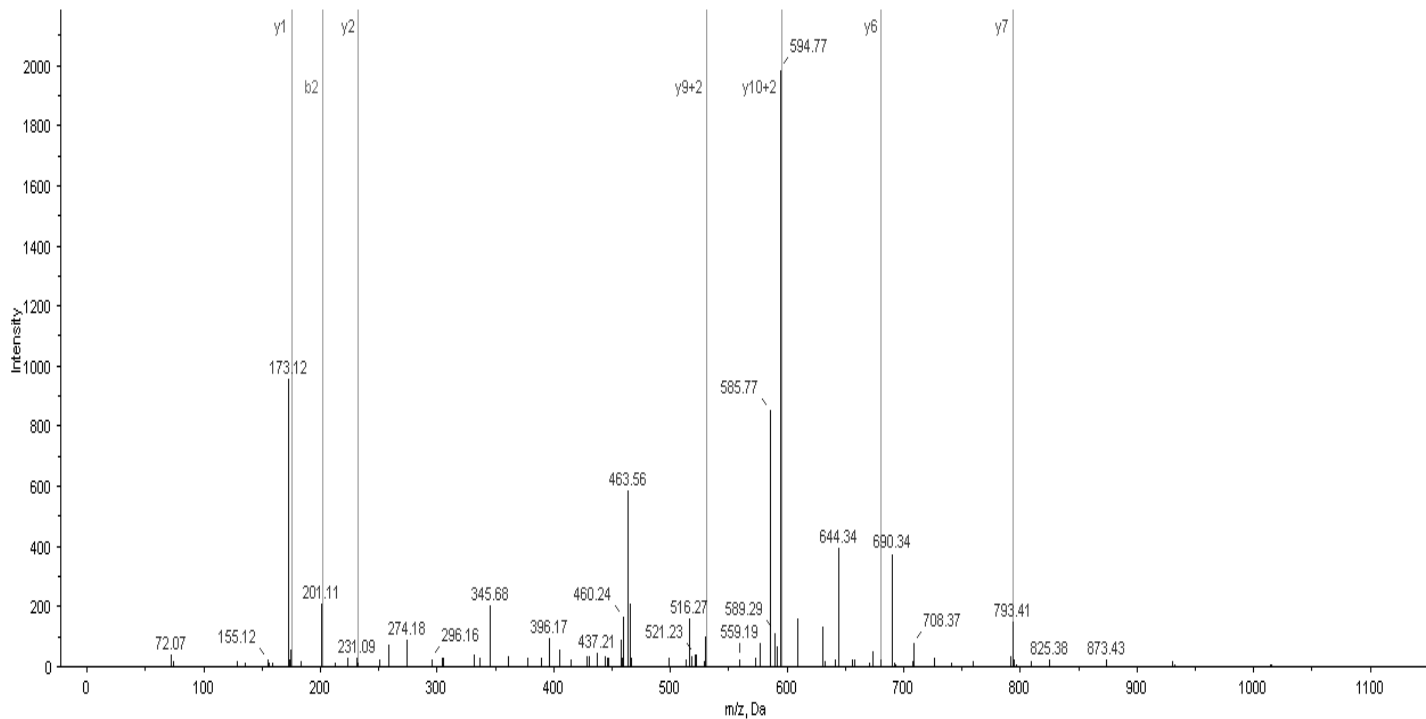
Netphos V2.0 score: not determined



Peptide PPL:SIEVSLDVPHGR

Netphos Bac score: not determined

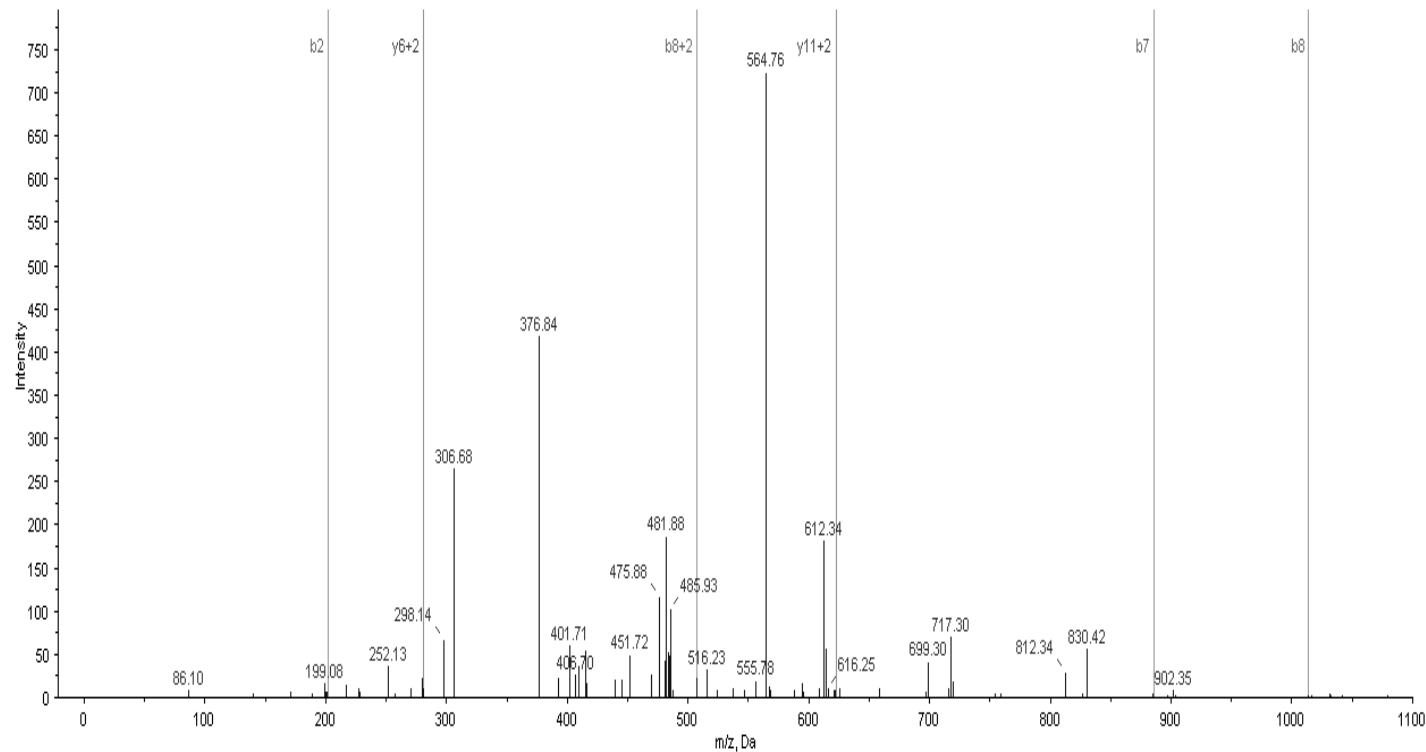
Netphos V2.0 score: not determined



Peptide PPL:EAARFETQAAAK

Netphos Bac score: not determined

Netphos V2.0 score: not determined

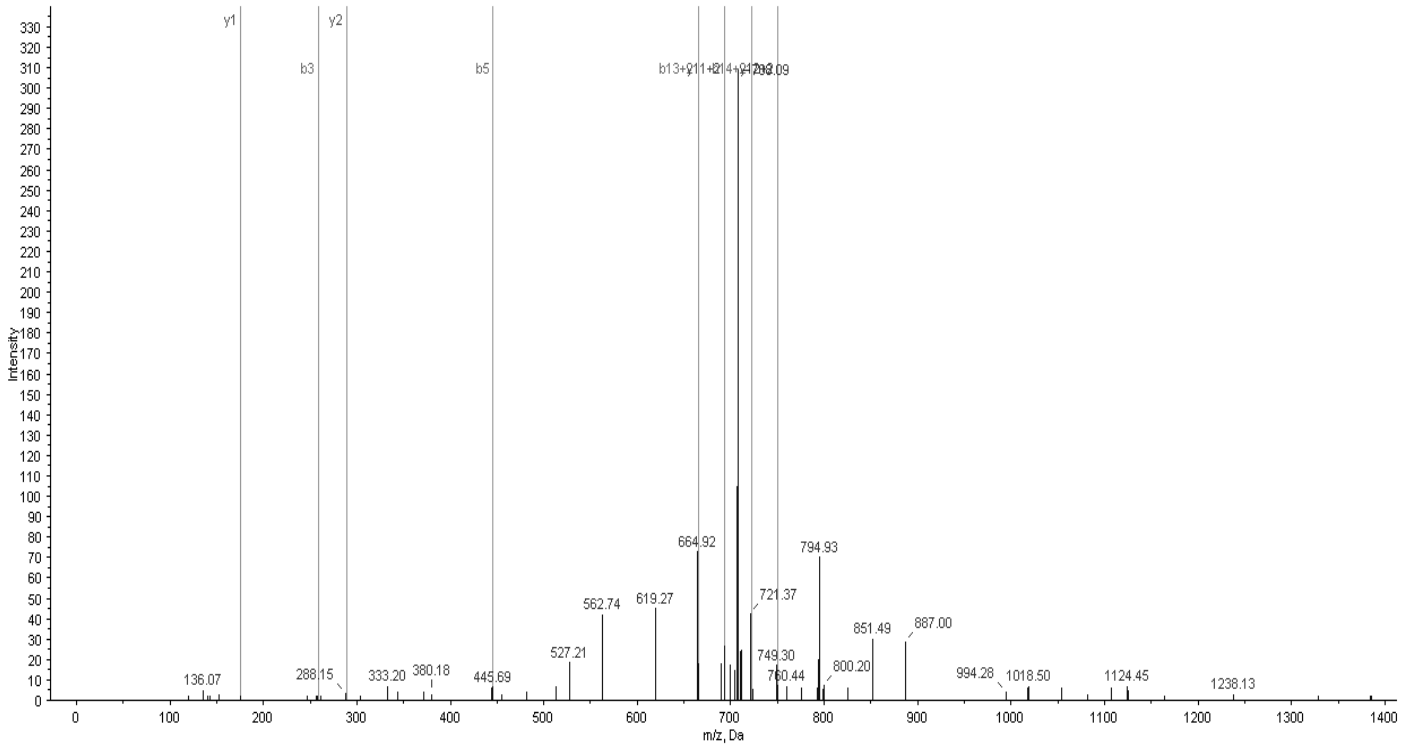


Name: SACE\_6241

Peptide PPL: DAAVSQANDLSKQLESARSEIENLR

Netphos Bac score: 0.512

Netphos V2.0 score: 0.991

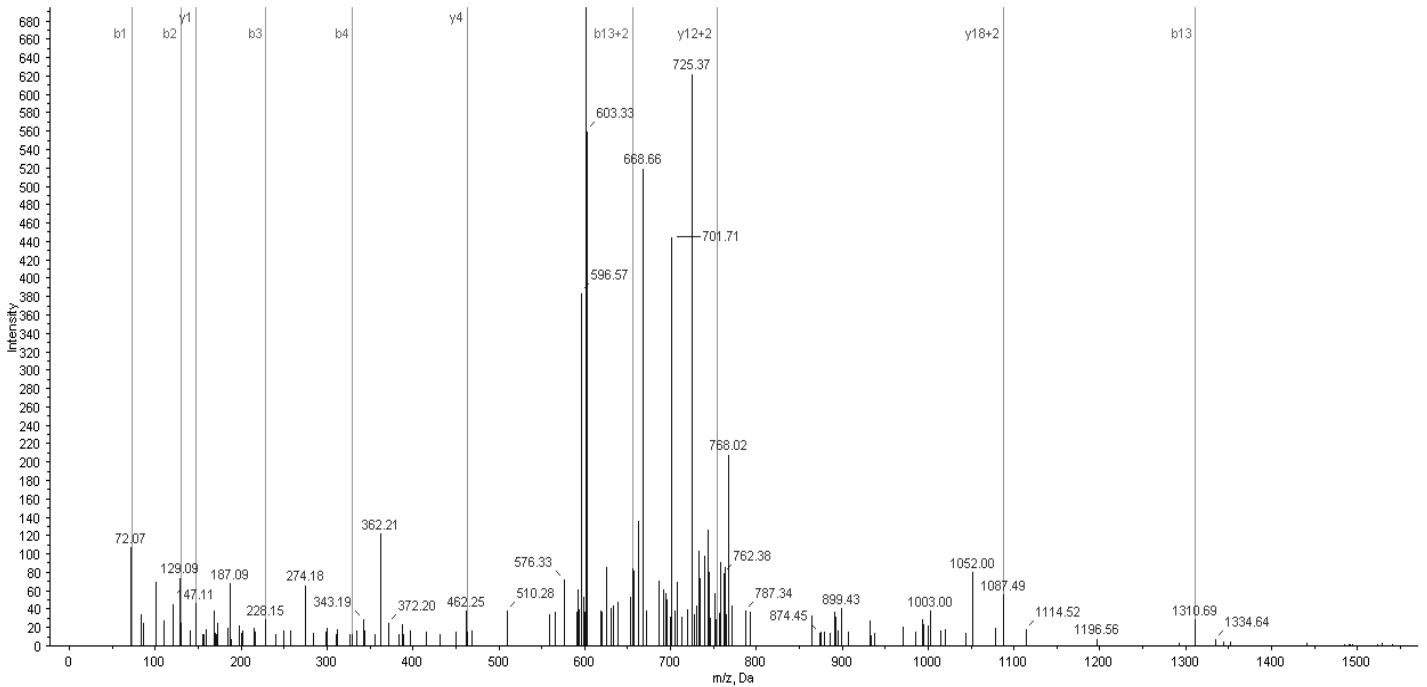


Name: SACE\_6324

Peptide PPL: AGVTLNVKLGNKDITYWSDISK

Netphos Bac score: 0.234

Netphos V2.0 score: 0.050

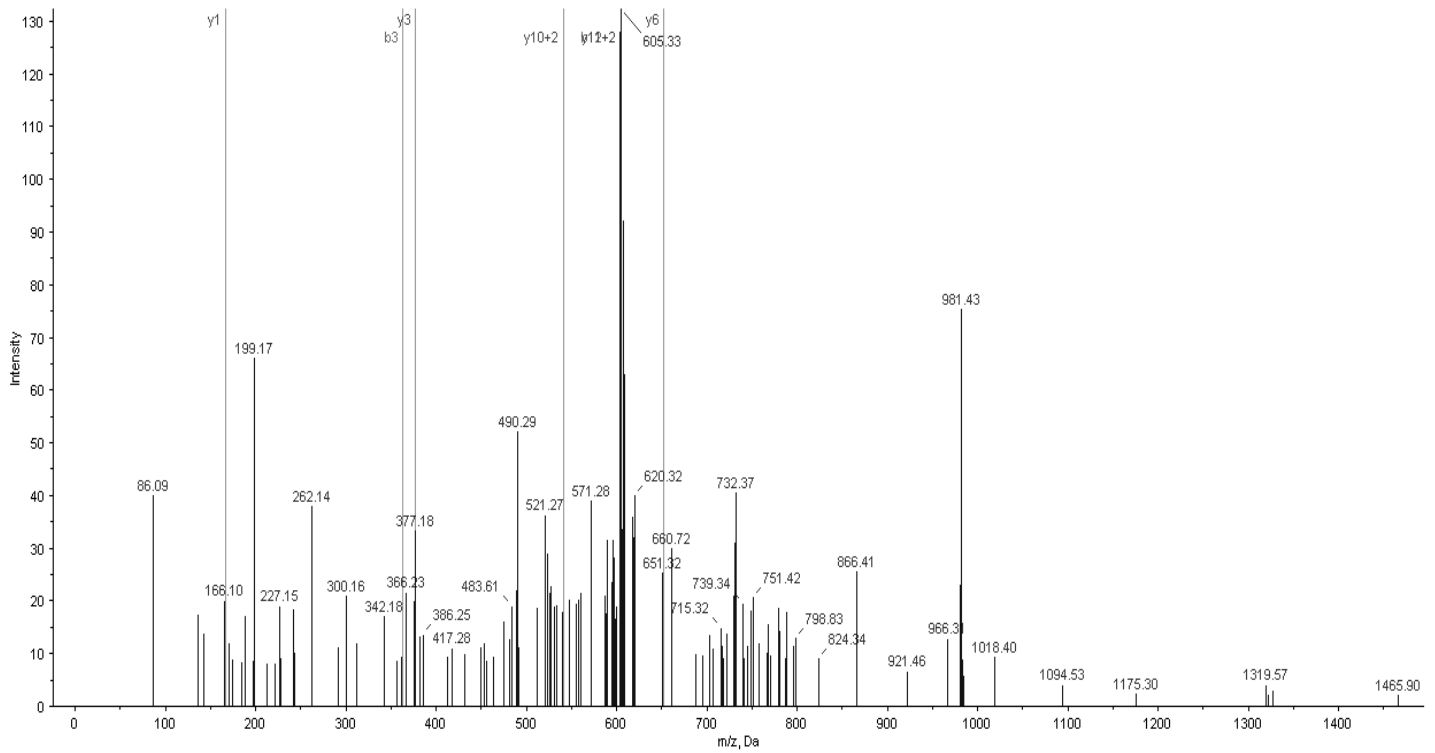


Name: SACE\_6155

Peptide PPL: SGHIGGAGIDVYKTEPTTSSPLF

Netphos Bac score: 0.315

Netphos V2.0 score: 0.021

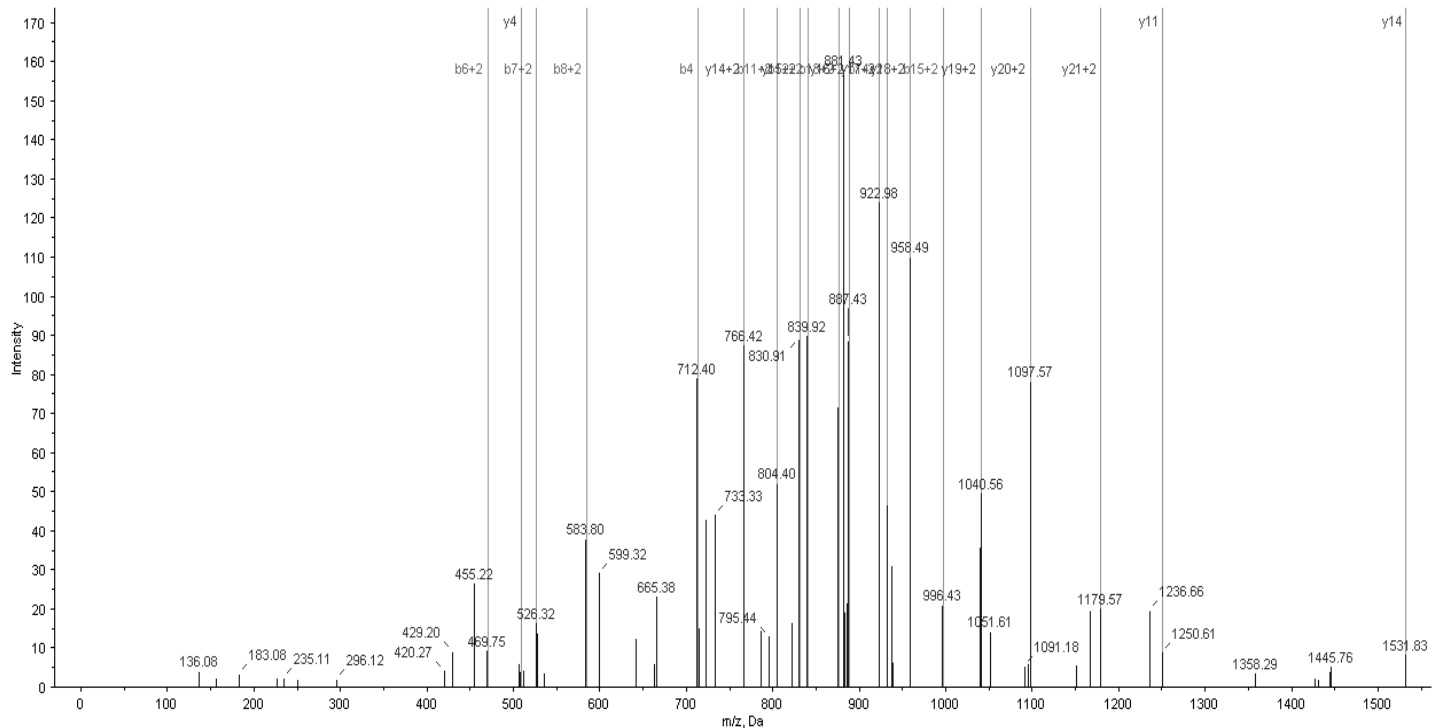


Name: SACE\_5364

Peptide PPL: QYVLPELDYDYAALEPAISGEINELHHSK

Netphos Bac score: not determined

Netphos V2.0 score: 0.650

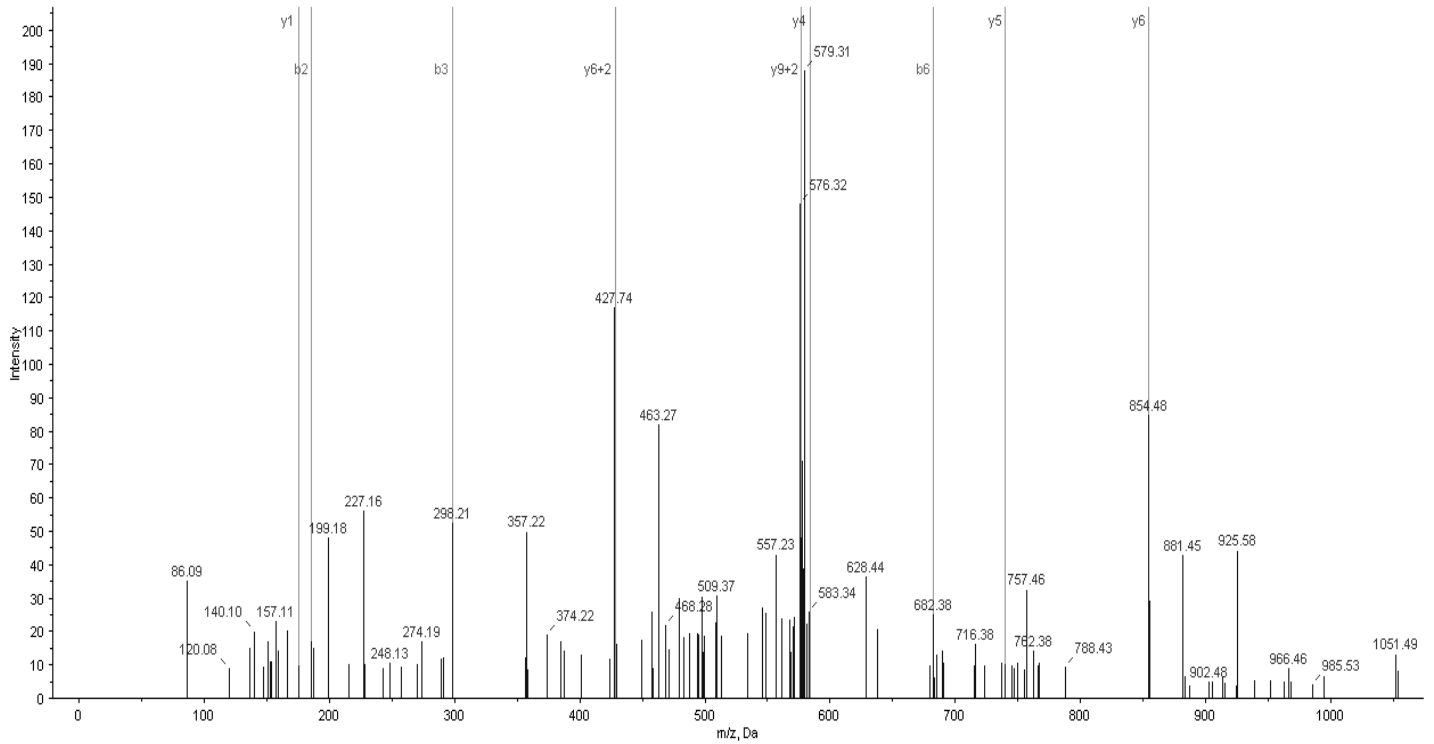


Name: SACE\_2160

Peptide PPL: ALLDRLSKR

Netphos Bac score: 0.538

Netphos V2.0 score: 0.997

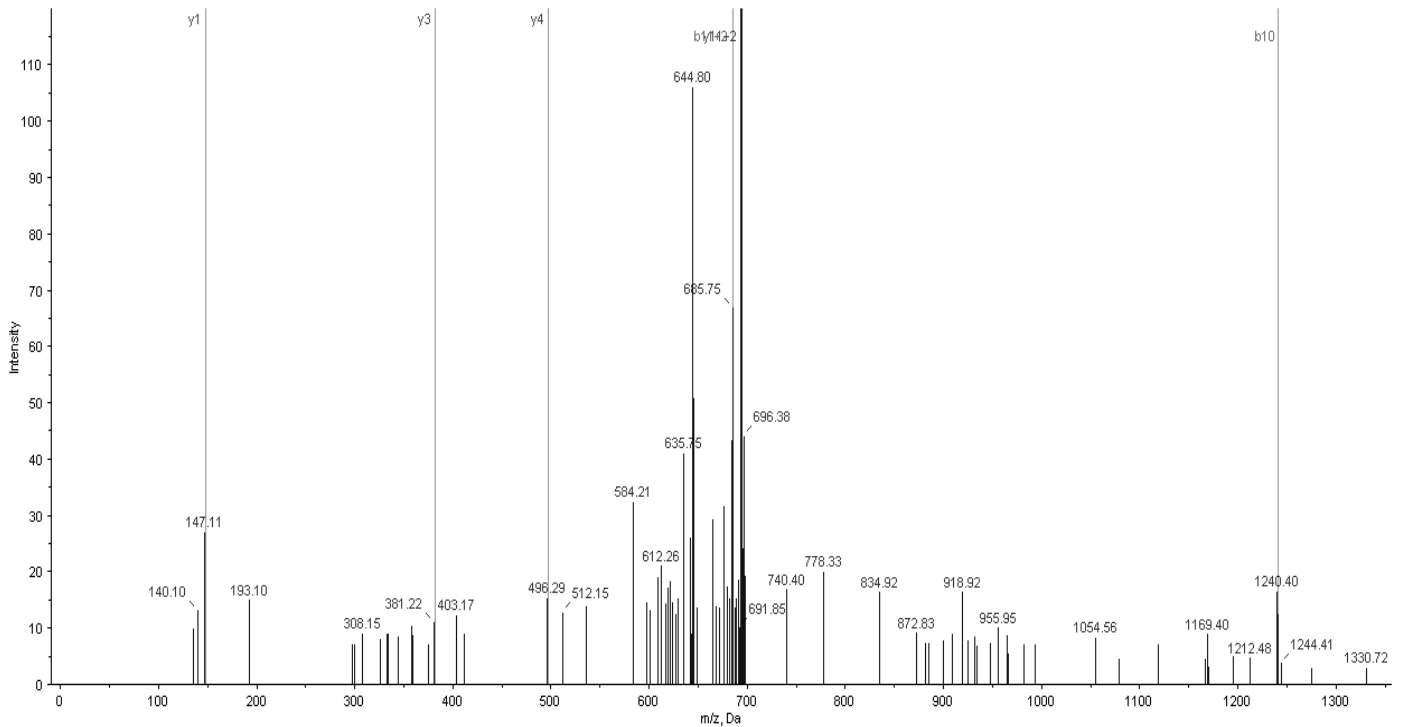


Name: SACE\_7385

Peptide PPL: NTVTVDTSFK

Netphos Bac score: 0.134; Netphos V2.0 score: 0.332

Netphos Bac score: 0.254; Netphos V2.0 score: 0.076



## Supplementary Figure Legend

**Supplementary Figure 1** Heat-map indicating the different protein phosphorylation profiles observed across the *S. erythraea* developmental cycle in bioreactor. Phosphorylation profiles are plotted as log-transformed ratios (phosphorylated/unphosphorylated). Clustering analysis identified nine different phosphorylation profiles shown as 2D-Plots. Phosphoproteins that increased in phosphorylation degree during the stationary phase are grouped in Clusters I and VII; Phosphoproteins that decreased in phosphorylation degree after the metabolic switch are grouped in Clusters II and VII; Phosphoproteins with a dynamic phosphorylation degree during the metabolic switch are grouped in Cluster IV. Clusters III and V group proteins with constant phosphorylation degree across the fermentation