

Fig. 1-44. MS/MS spectra of the N-terminally arginylated peptides for proteins shown in Table 1 of the main text. Peptide sequence, accession number, and protein name are listed on top of each spectrum. N-terminally arginylated I, Q, and R were not found. One protein was found to be arginylated on initiator Met (Figure 19) and two more cases of arginylation on internal Met have been found (Figures 5 and 20).

Figure 1

RLYANNVLSGGTTMYPGIADR

>gi|14192922|ref|NP_033738.1| actin, alpha, cardiac

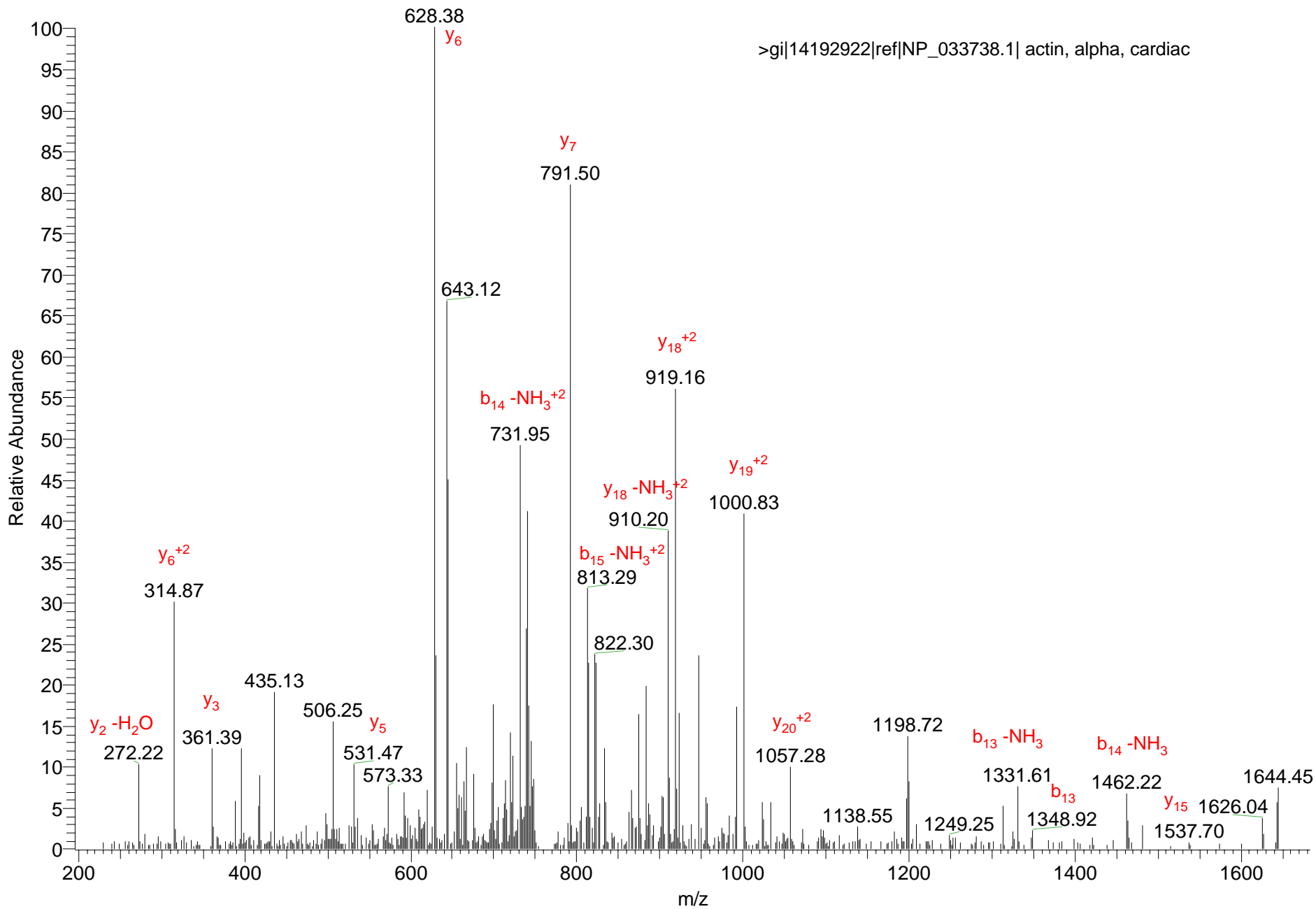


Figure 2

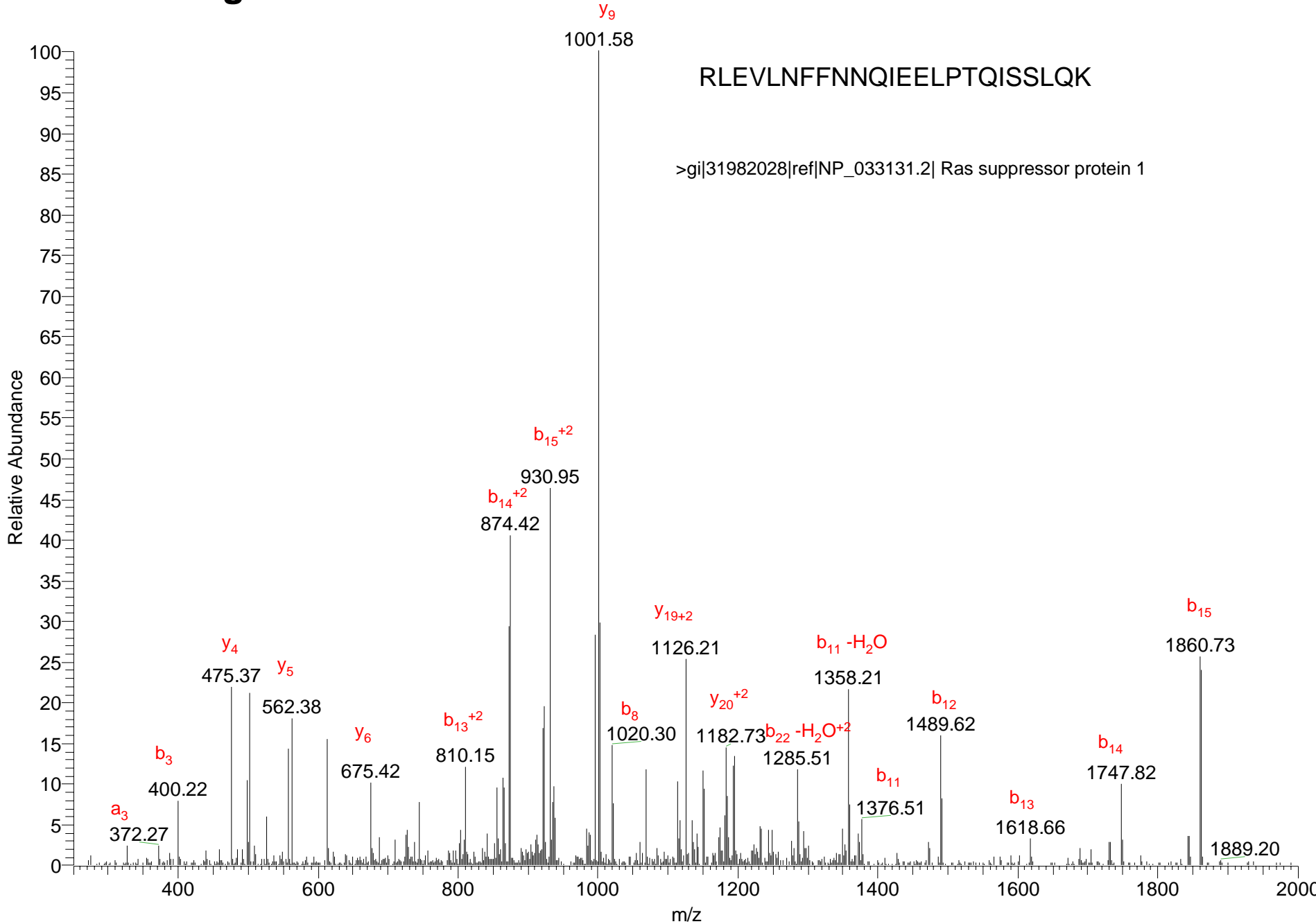


Figure 3

MH-CH₃CO

1198.52

1224.47

MH-NH₃

RSYVGDEAQS_K

>gi|6671509|ref|NP_031419.1| actin, beta, cytoplasmic

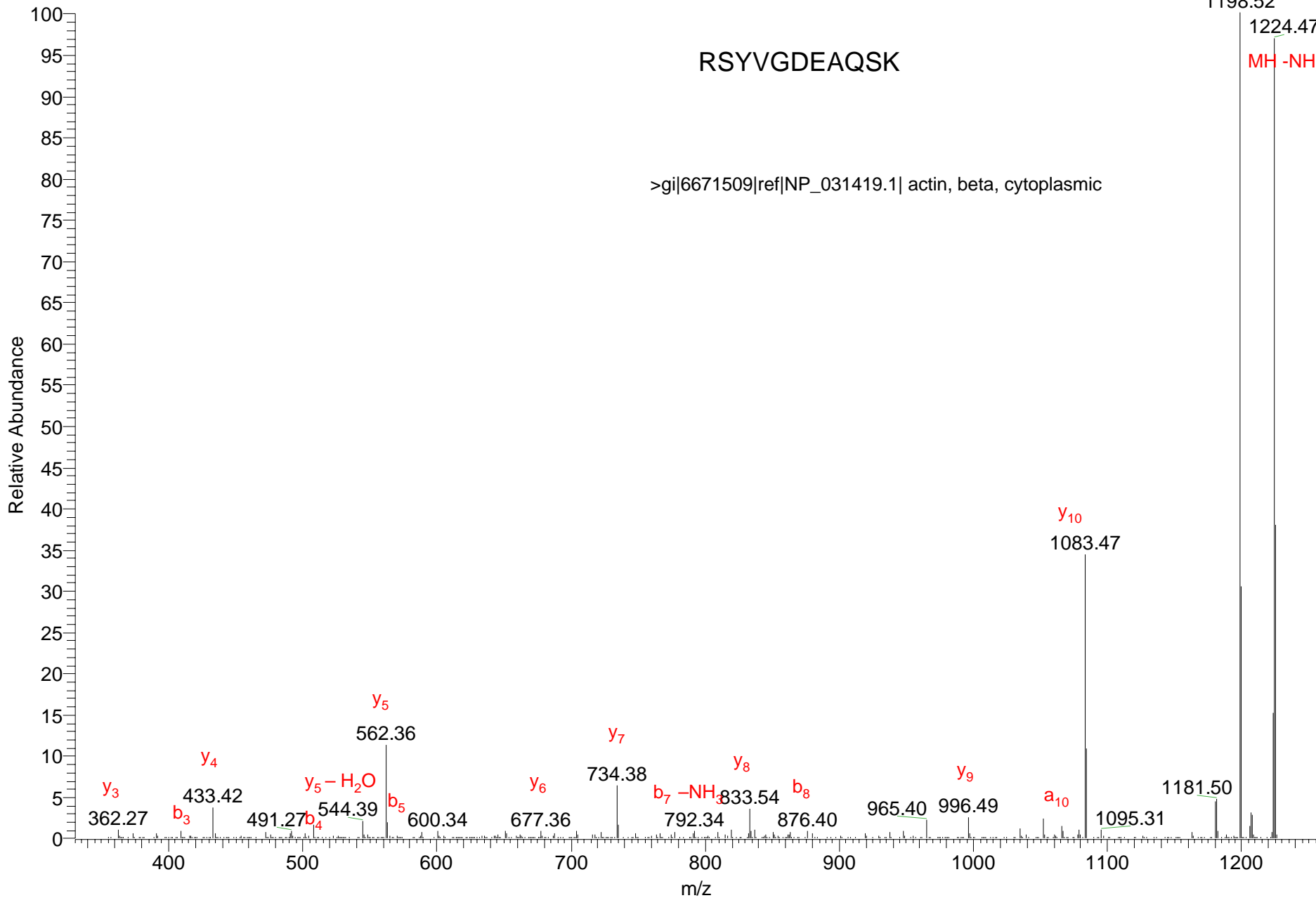


Figure 4

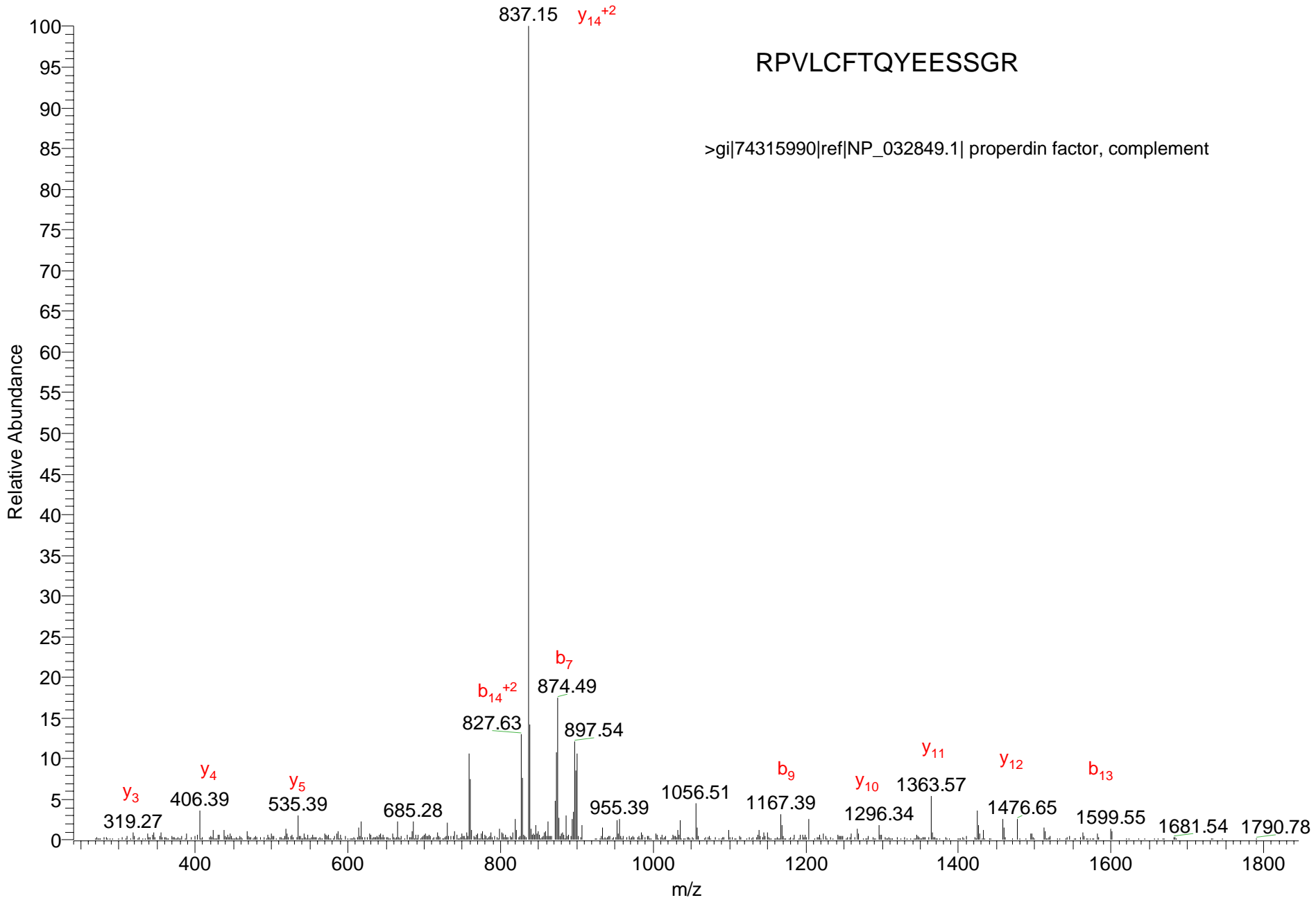


Figure 5

>gi|20137006|ref|NP_071855.1| myosin, heavy polypeptide 9, non-muscle isoform 1

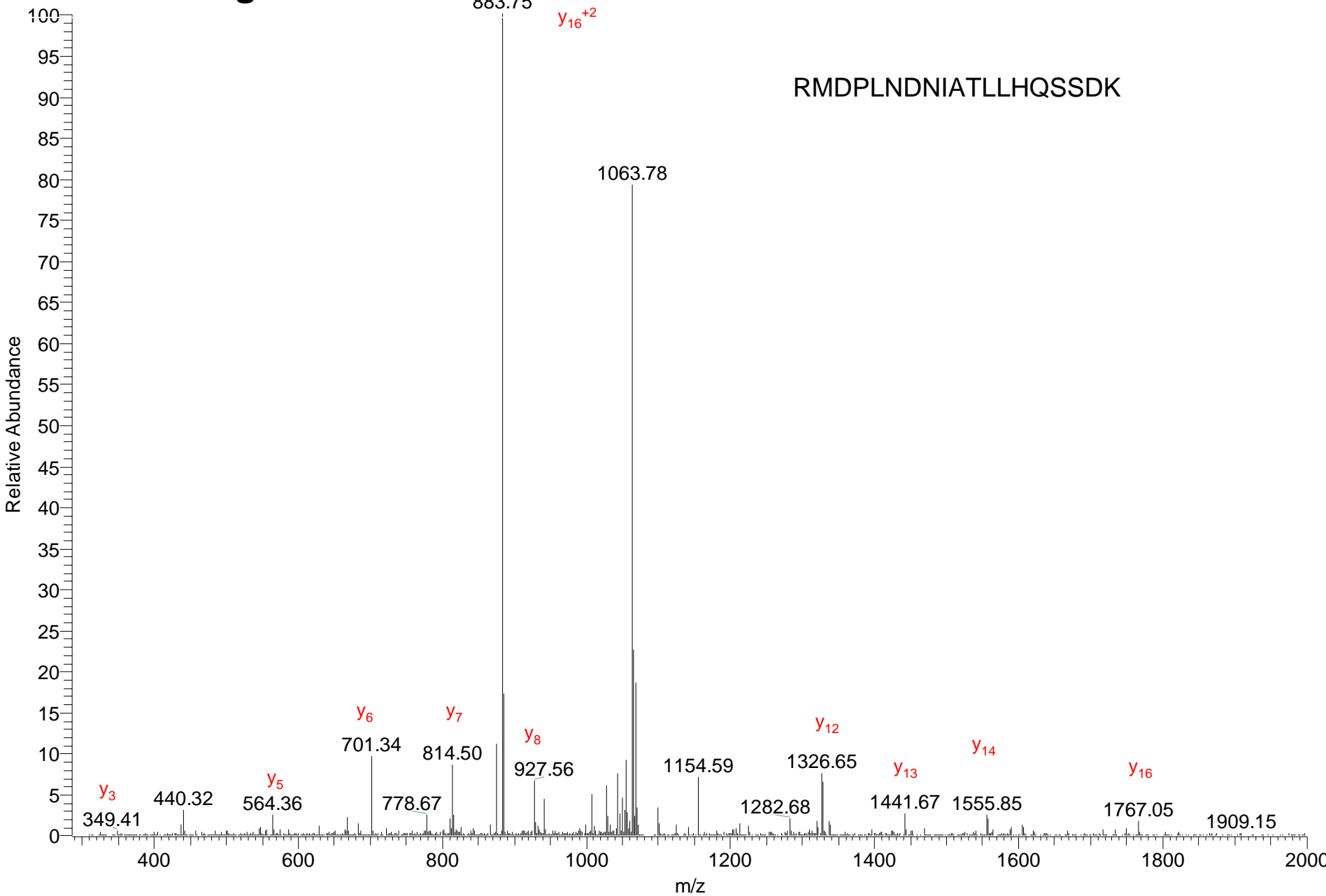


Figure 6

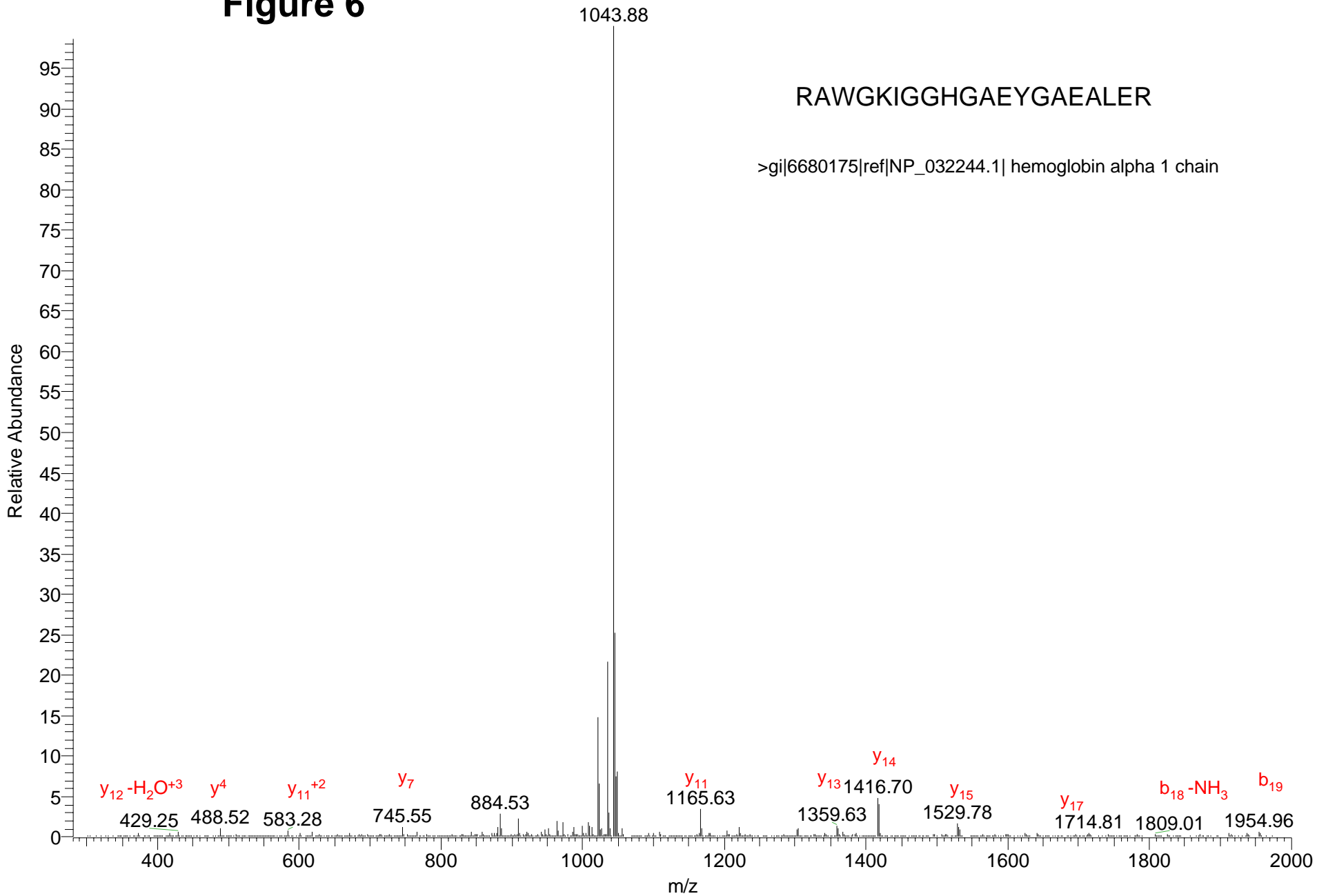


Figure 7

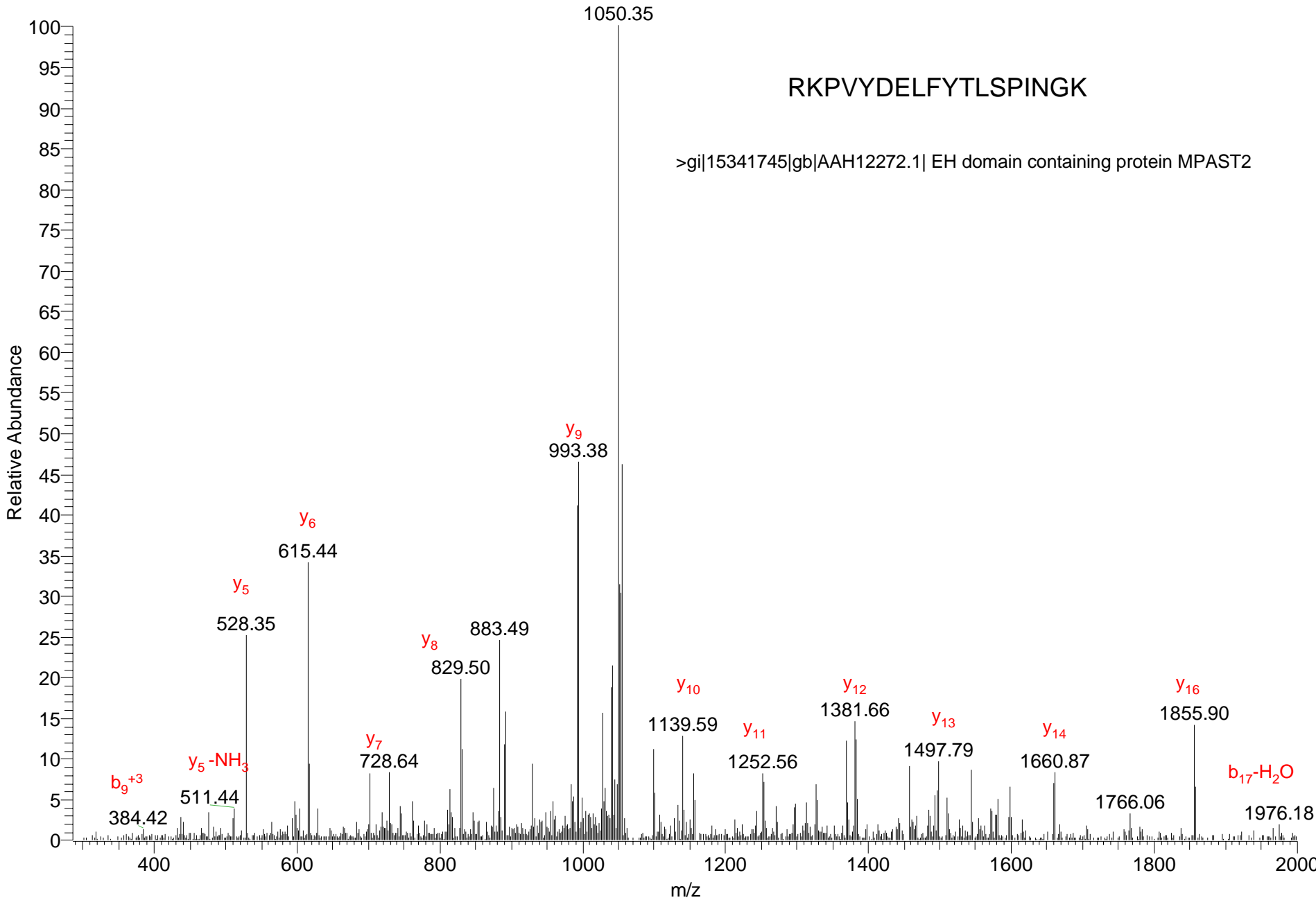


Figure 8

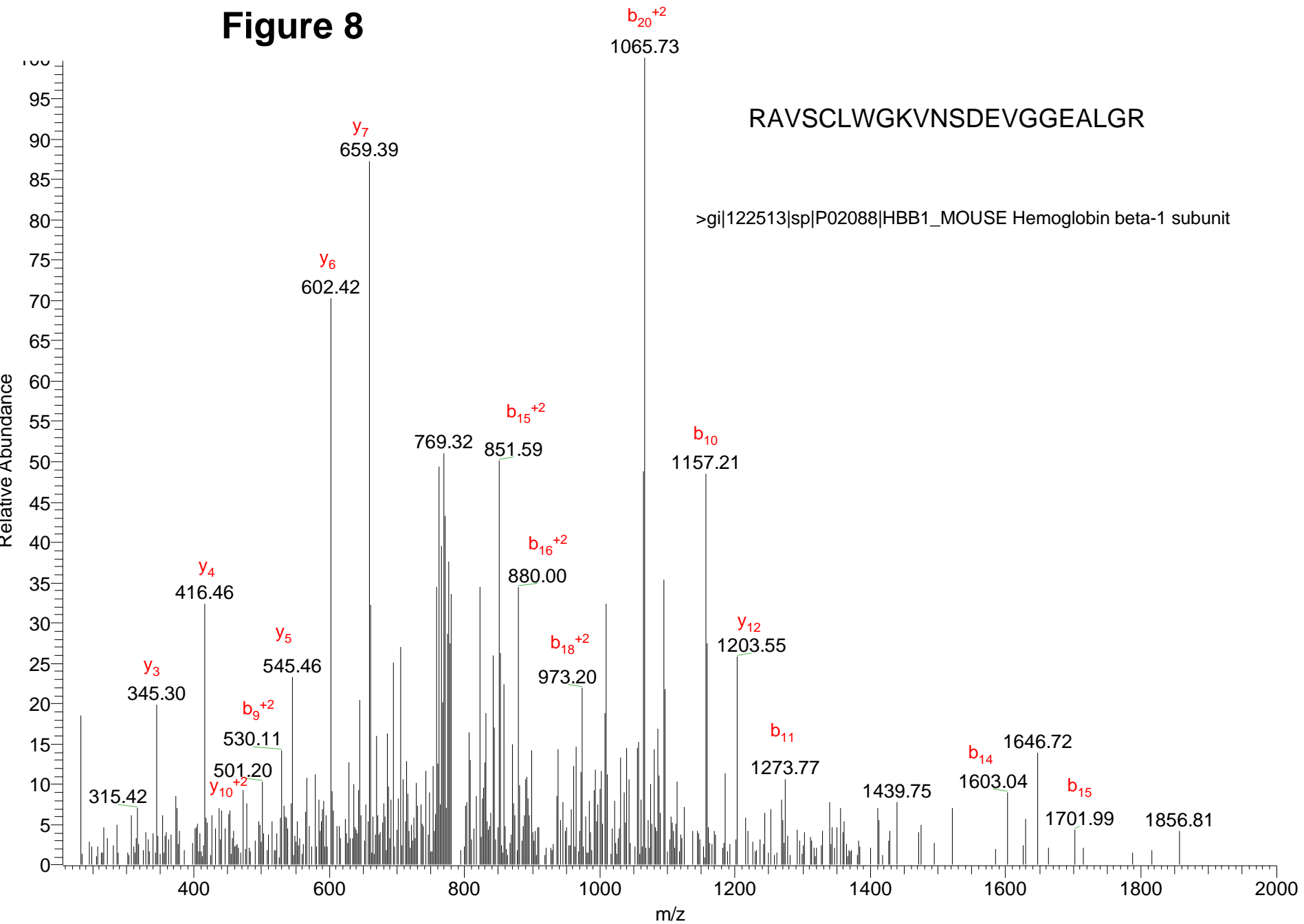


Figure 9

RGDDGAEYVVESTGVFTTMEK

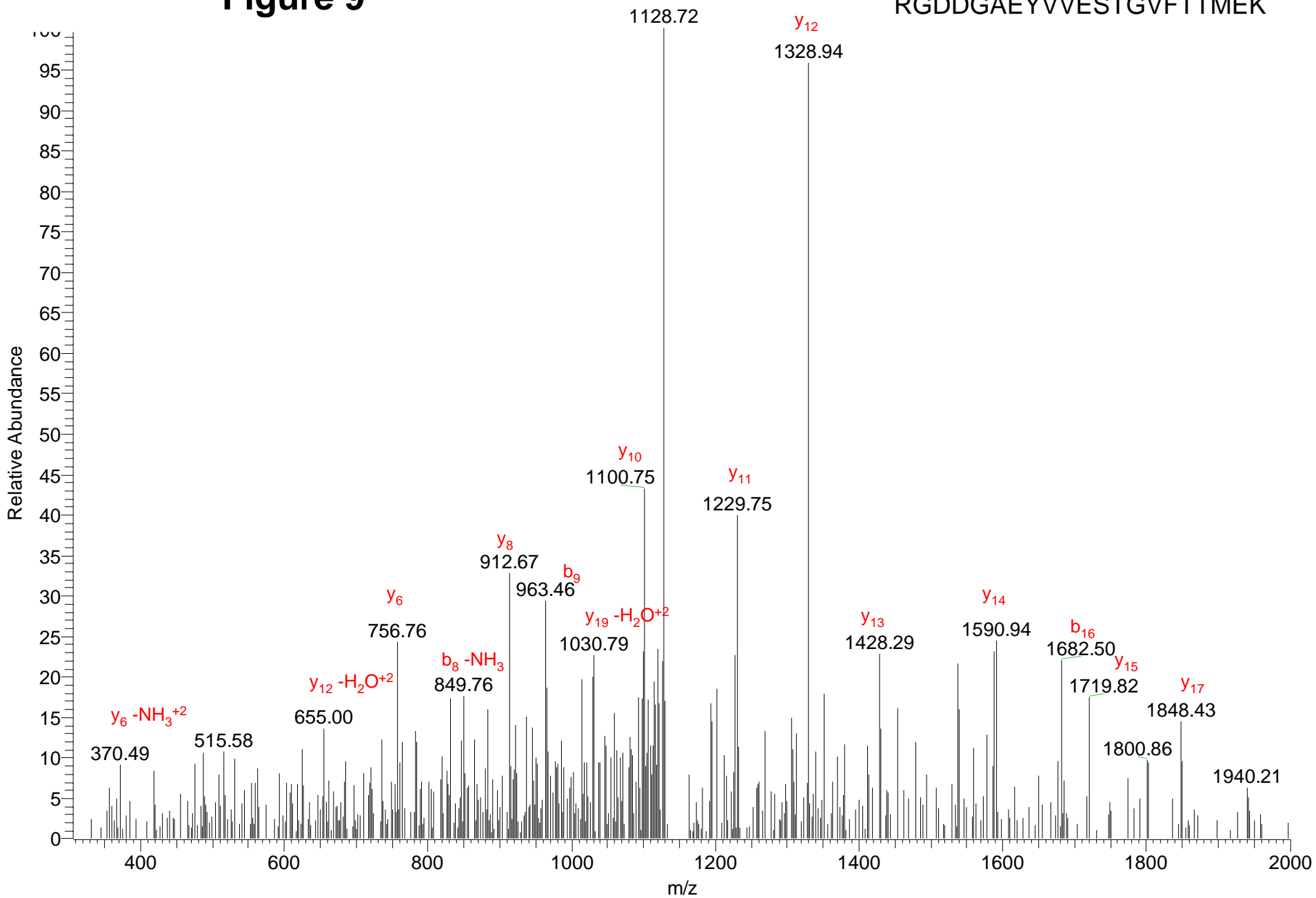


Figure 10

>gi|6755943|ref|NP_035808.1| ubiquitin specific protease 4

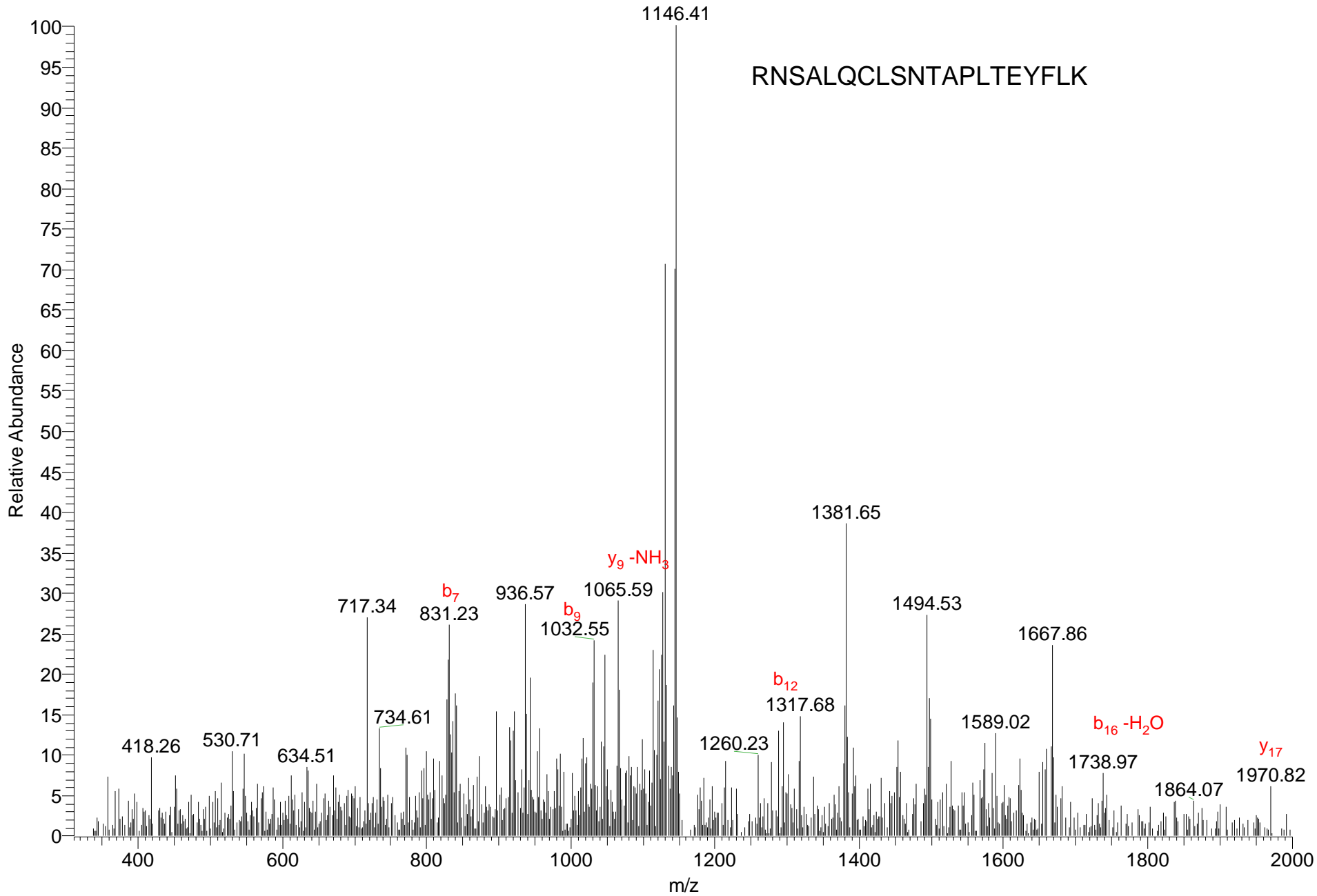


Figure 11

RAAVAAENEEIGAIHK

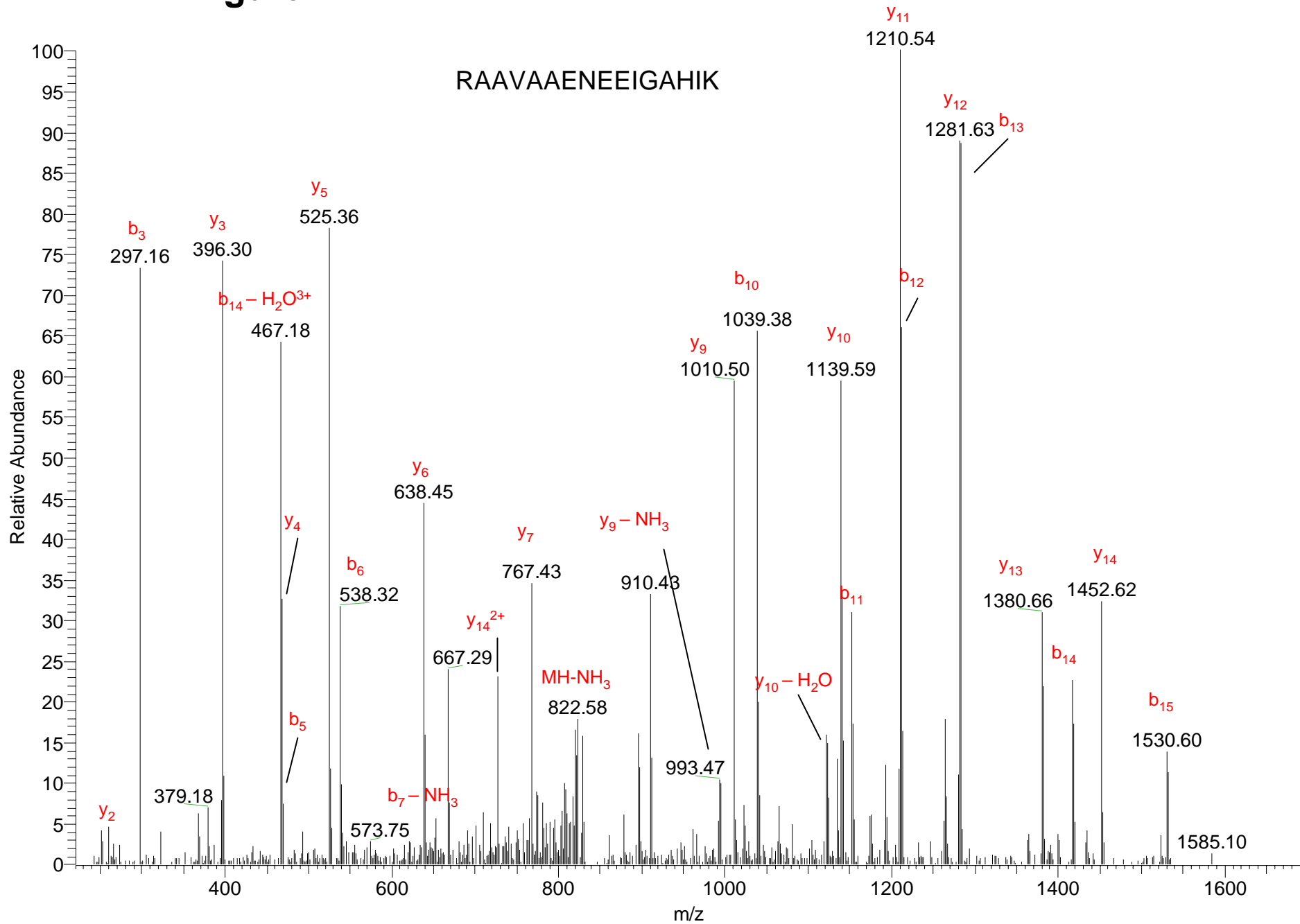


Figure 12

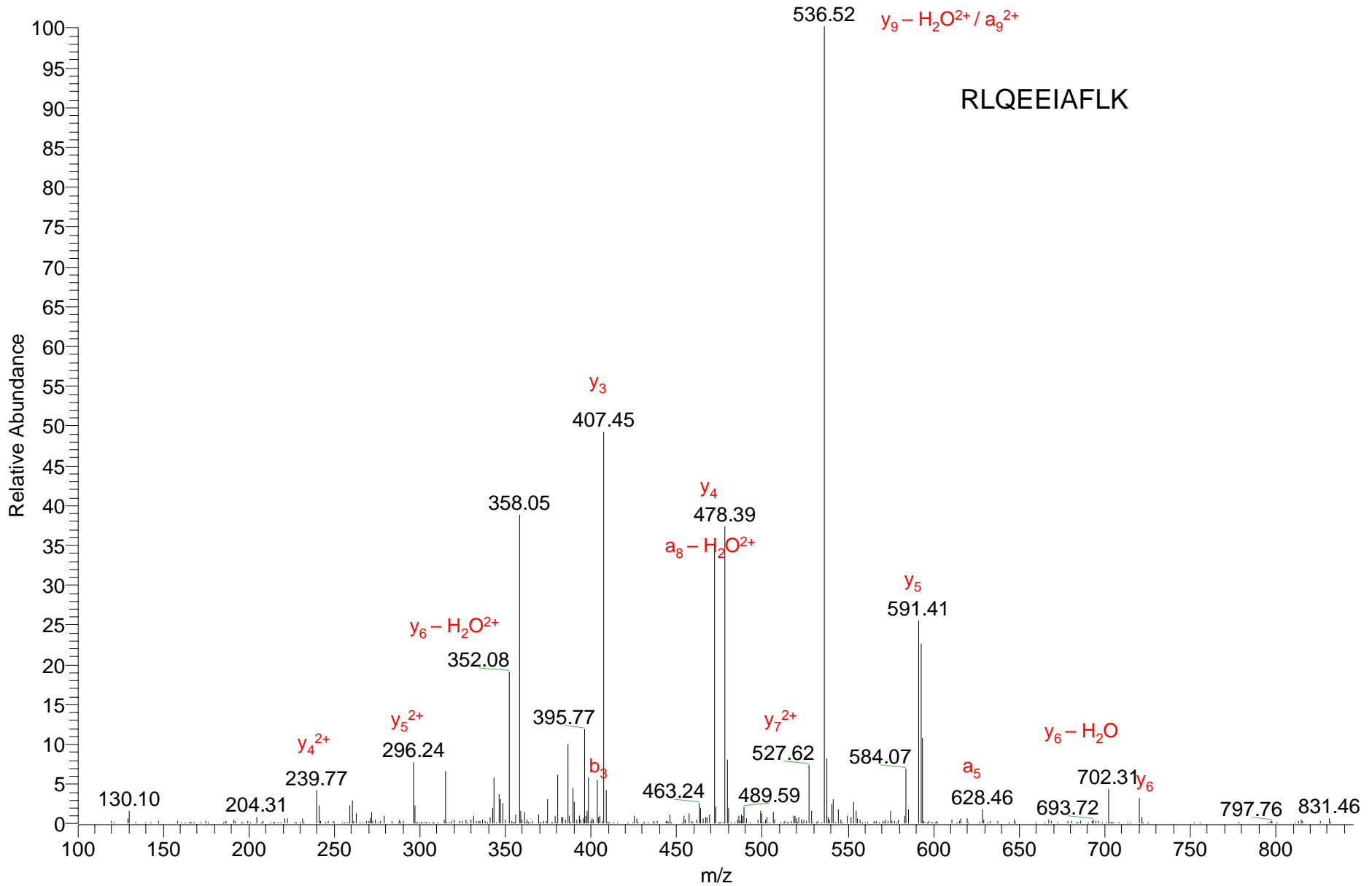


Figure 13

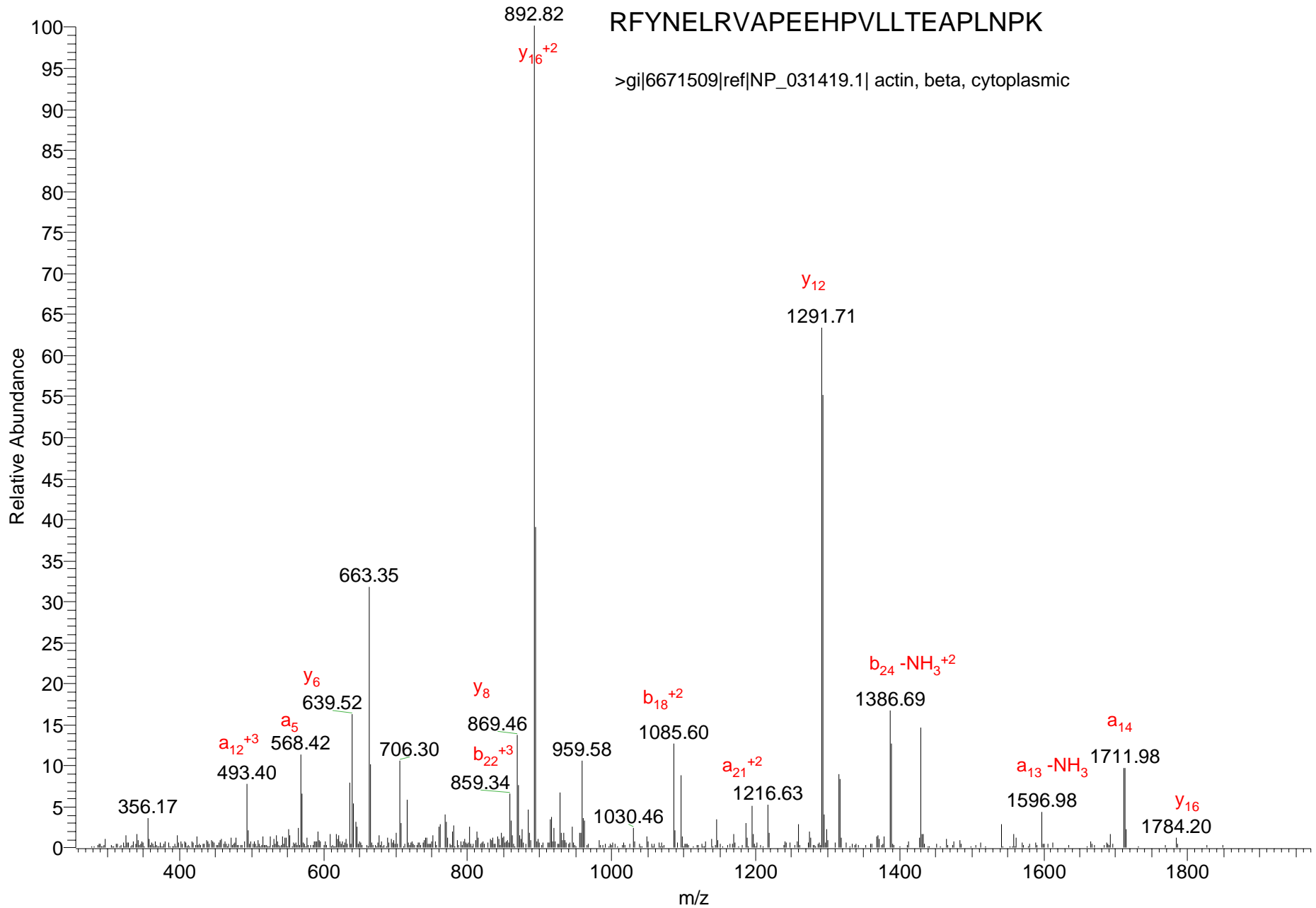


Figure 14

RNGASAGVAAQHSQCFAAWYGHCPGLK

>gi|18152793|ref|NP_077183.1| pyruvate dehydrogenase (lipoamide) beta

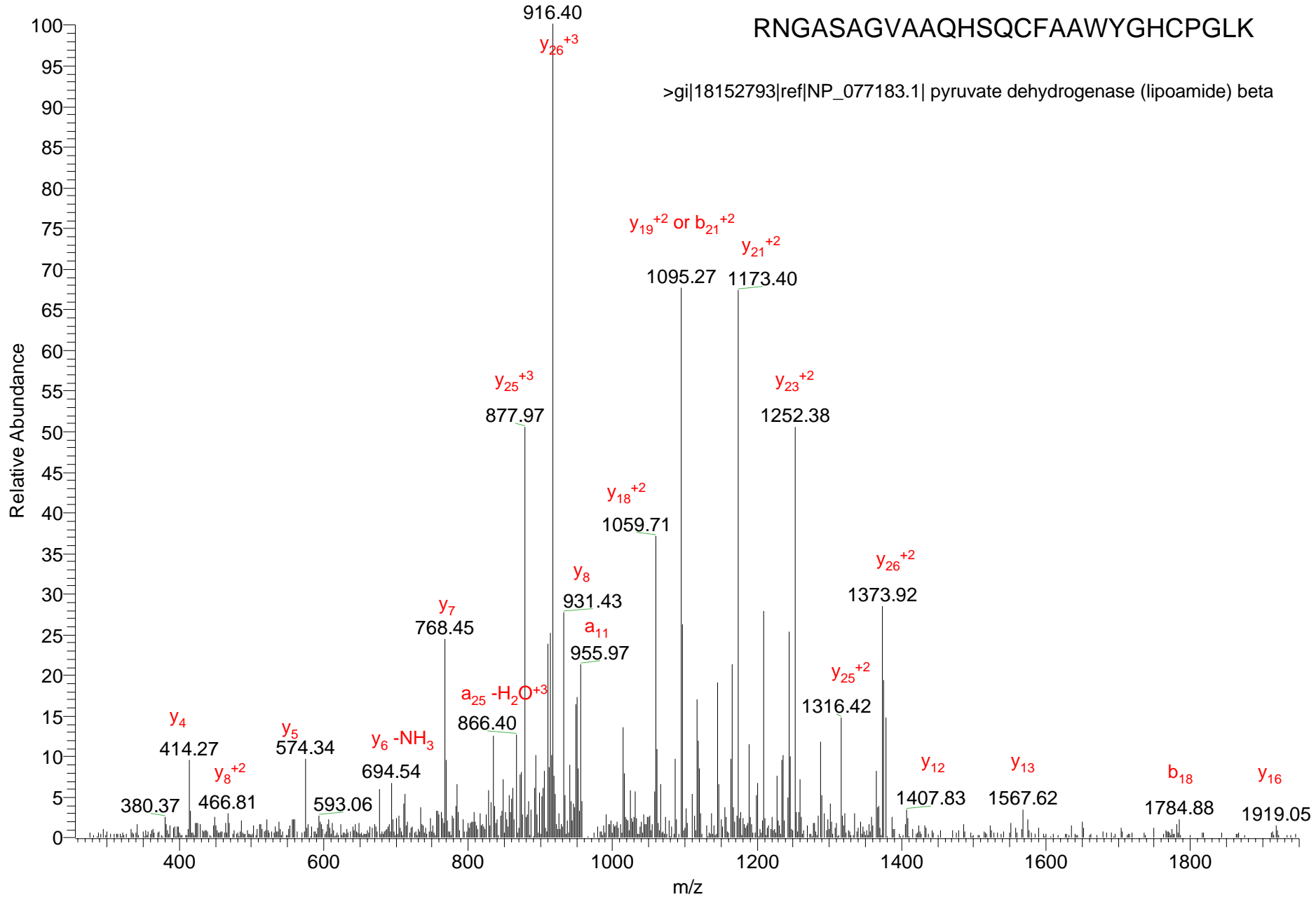


Figure 15

REHCDCLQGFQLTHSLGGGTGSGMGTTLLISK

>gi|68775966|sp|Q922F4|TBB6_MOUSE Tubulin beta-6 chain

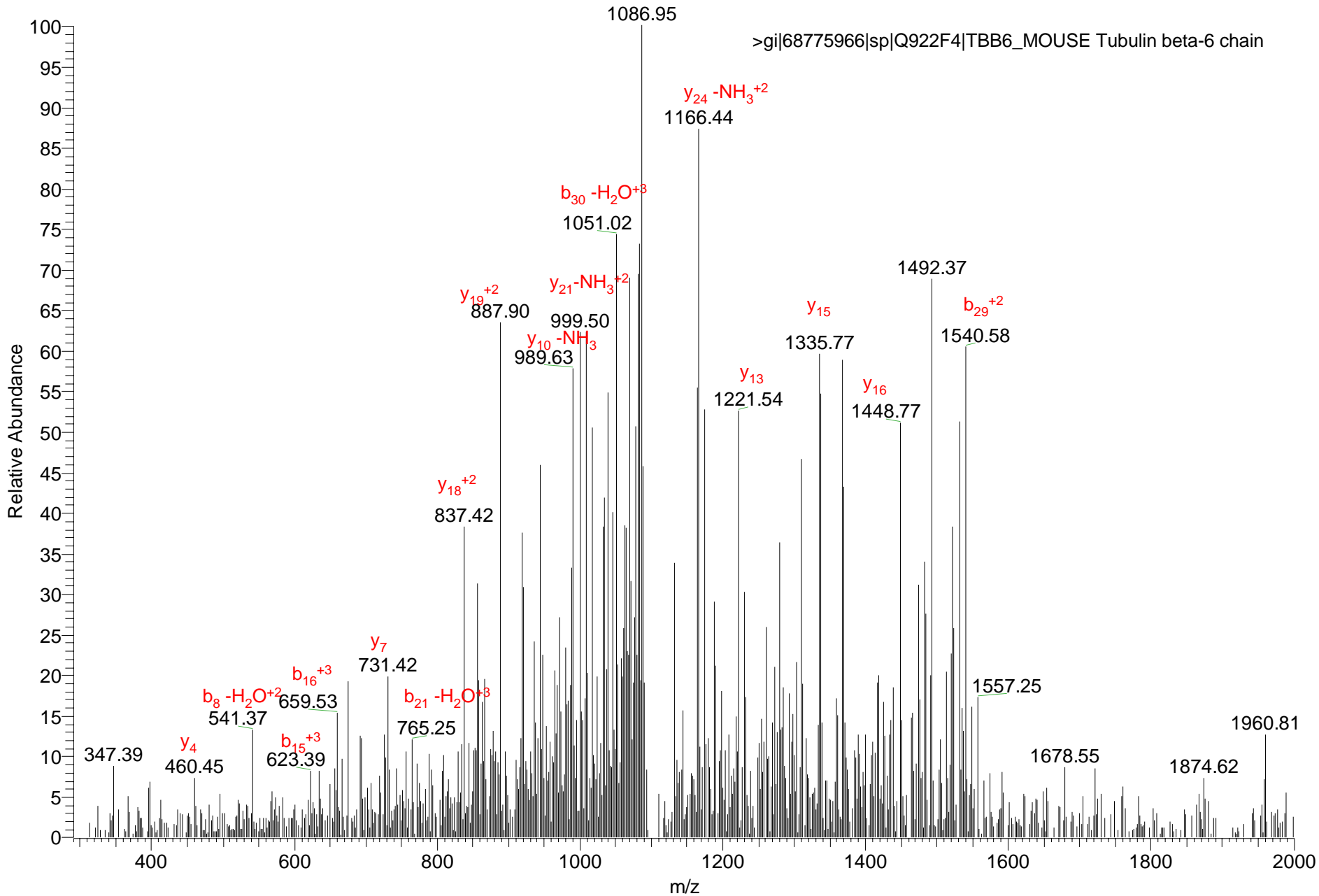


Figure 16

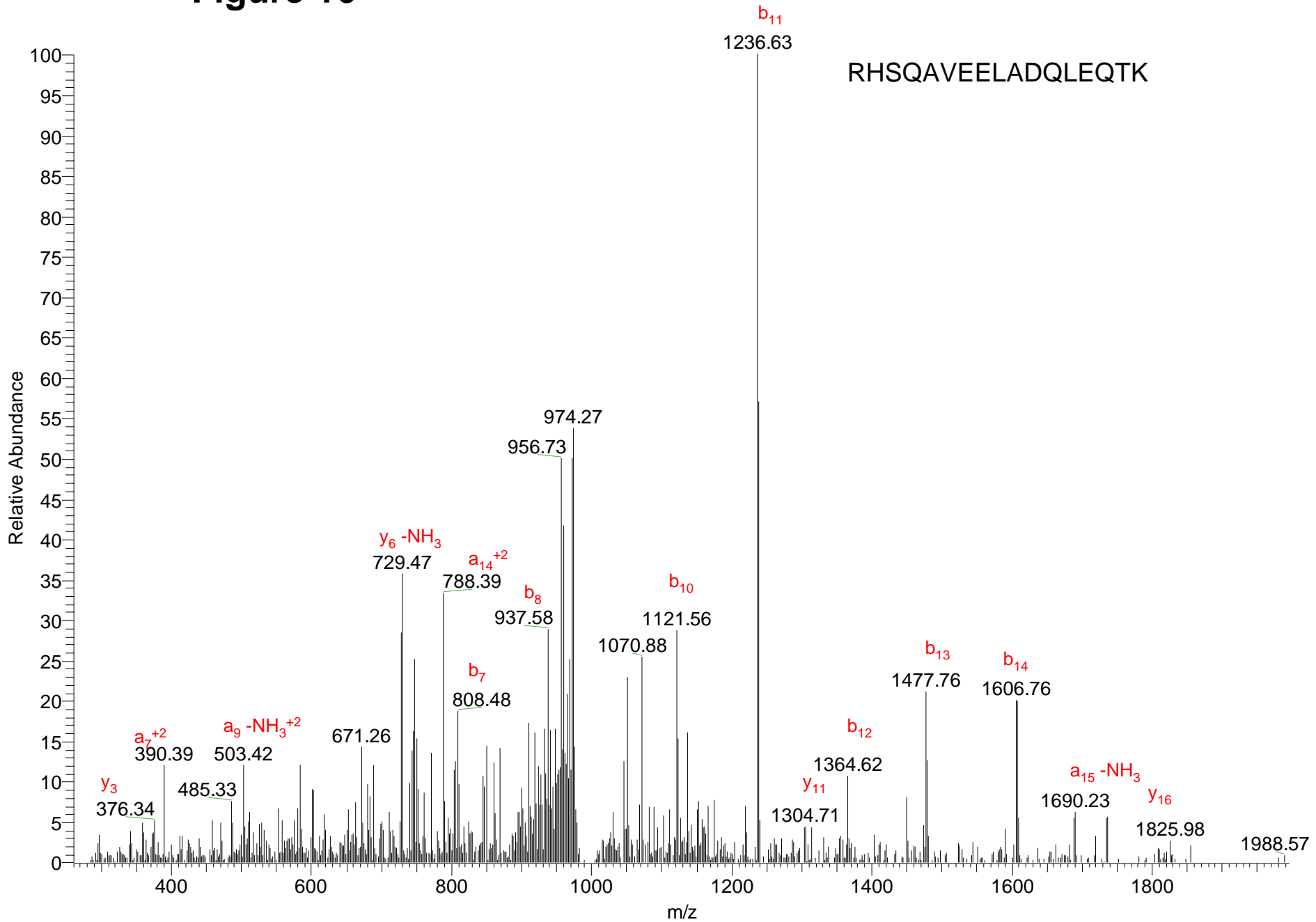


Figure 17

RTDQASMPDNTAAQK

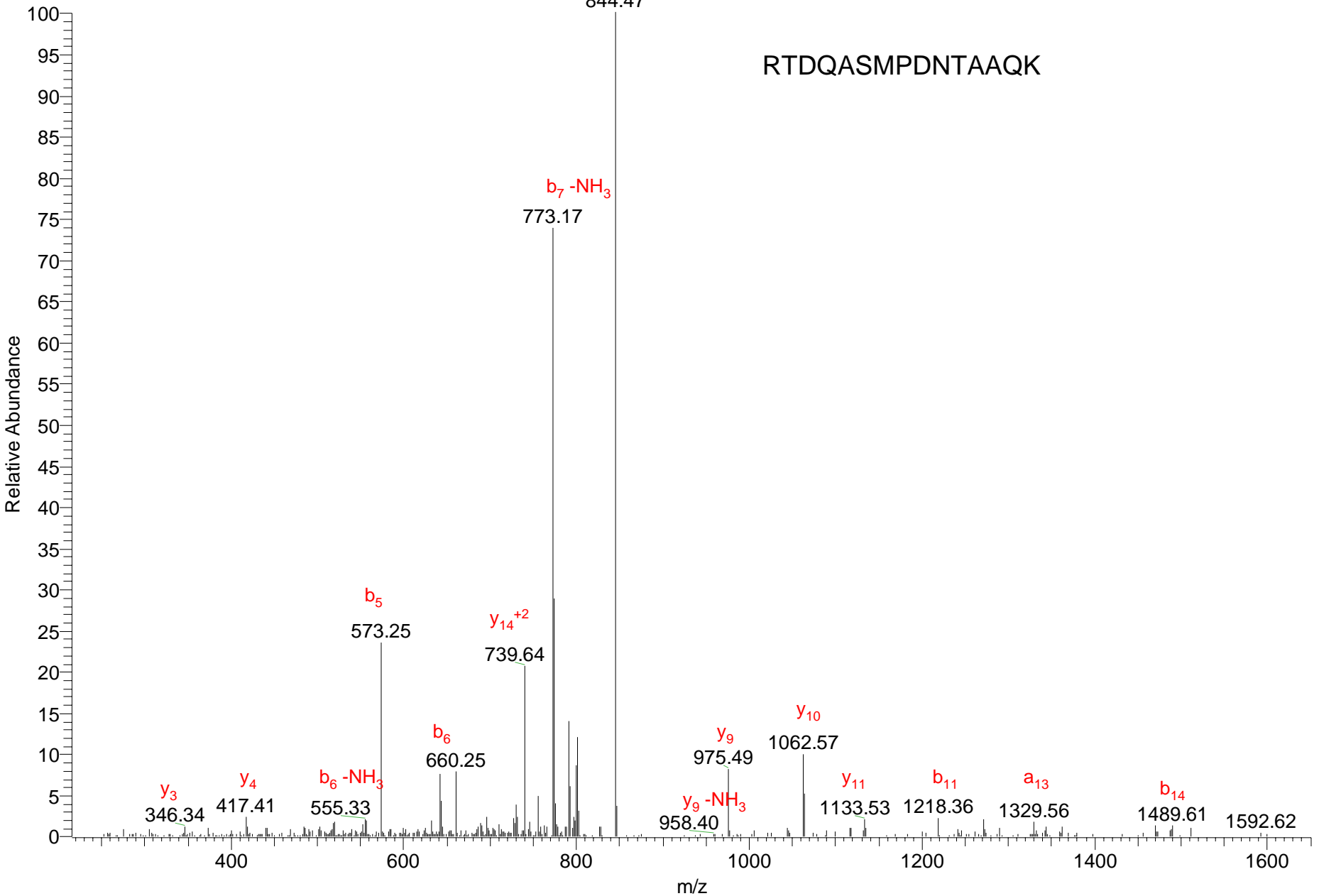


Figure 18

>gi|52345394|ref|NP_001004365.1| ARP3 actin-related protein 3 homolog B

RGSLPPCVVDCGTGYTK

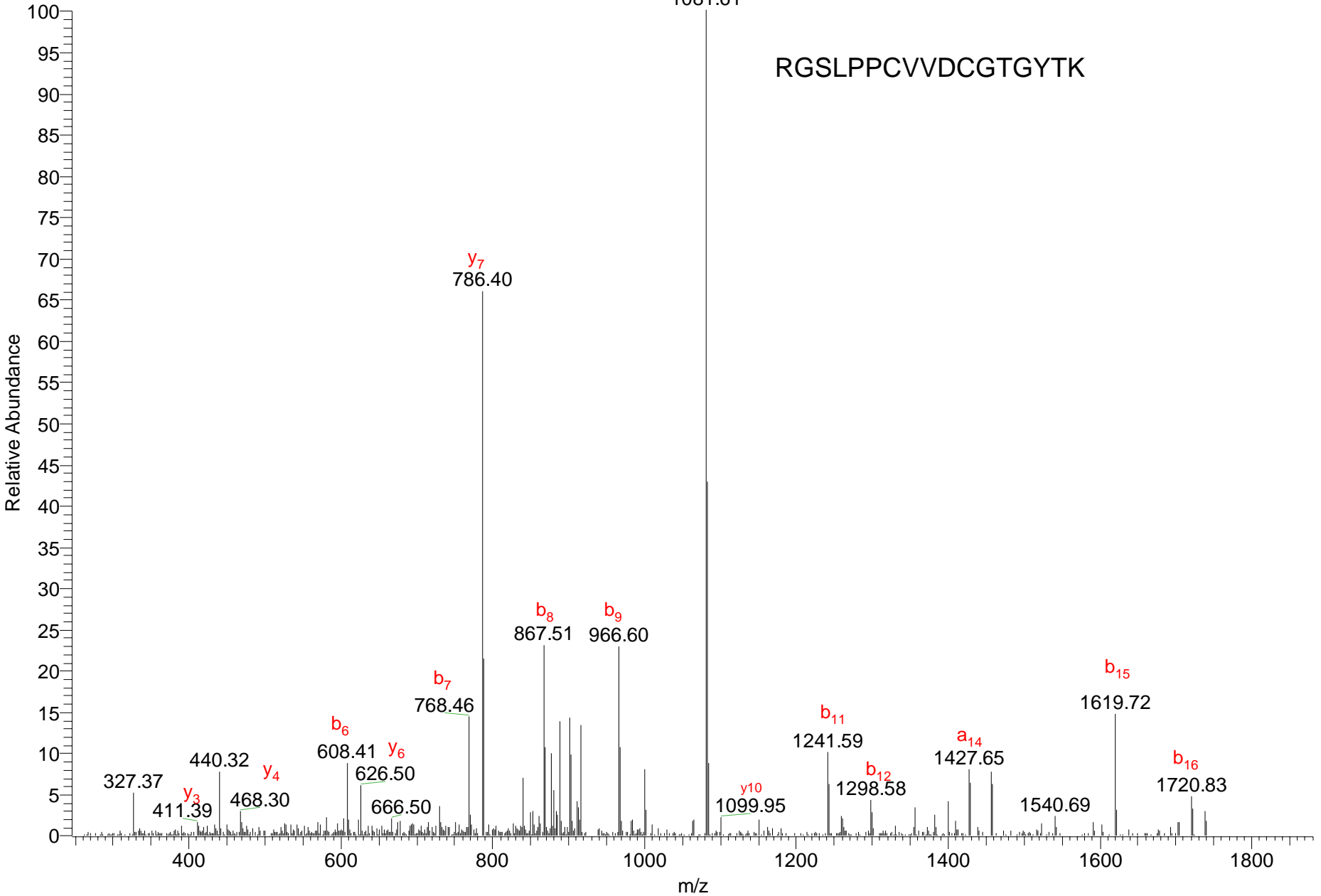


Figure 19

RMCDRKAVIKNADMSEEMQQDSVECATQALEK

>gi|31981035|ref|NP_062656.2| dynein, cytoplasmic, light peptide

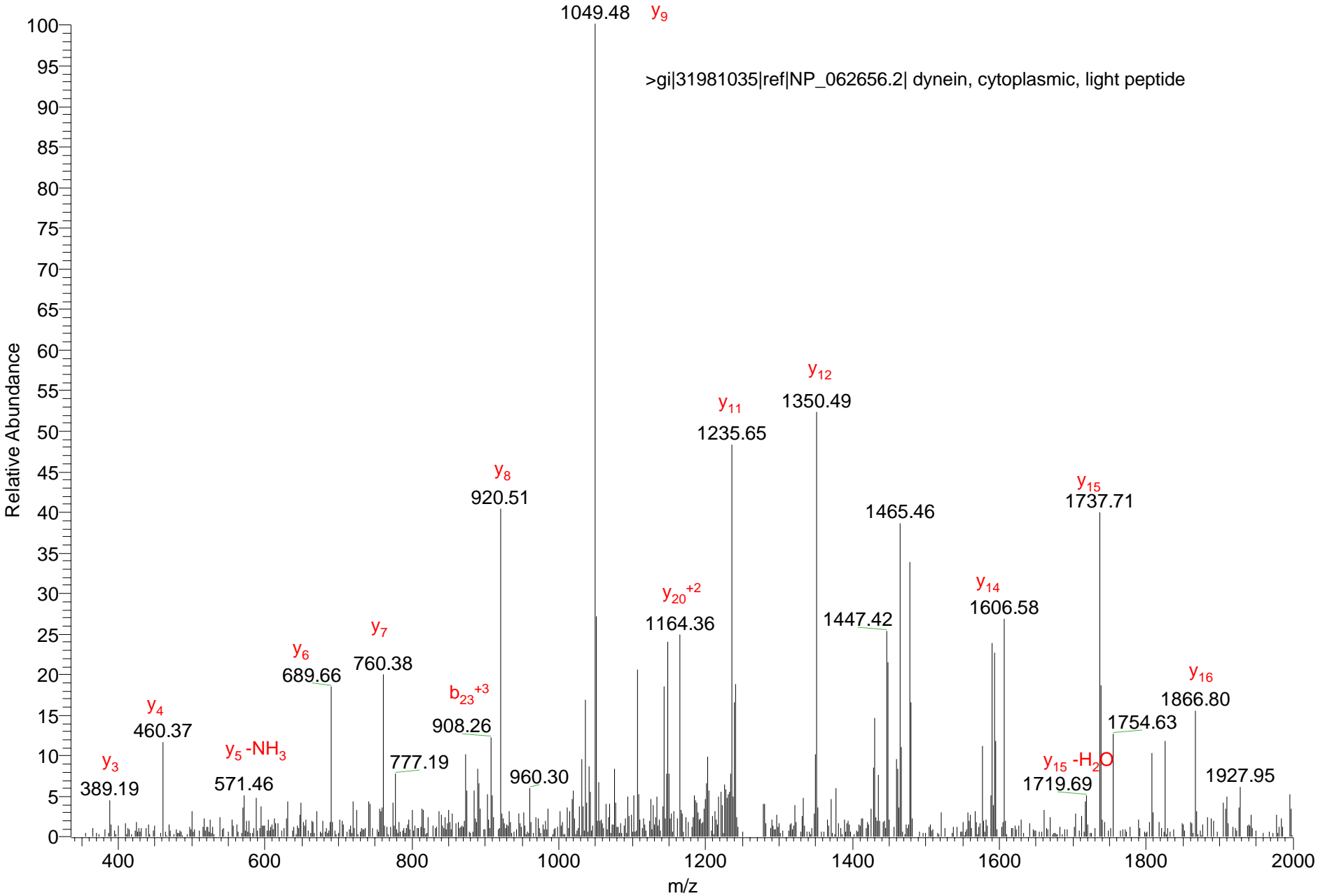


Figure 20

RMHSGPVMVWEGLNVVK

>gi|37700232|ref|NP_032730.1| nucleoside-diphosphate kinase 1

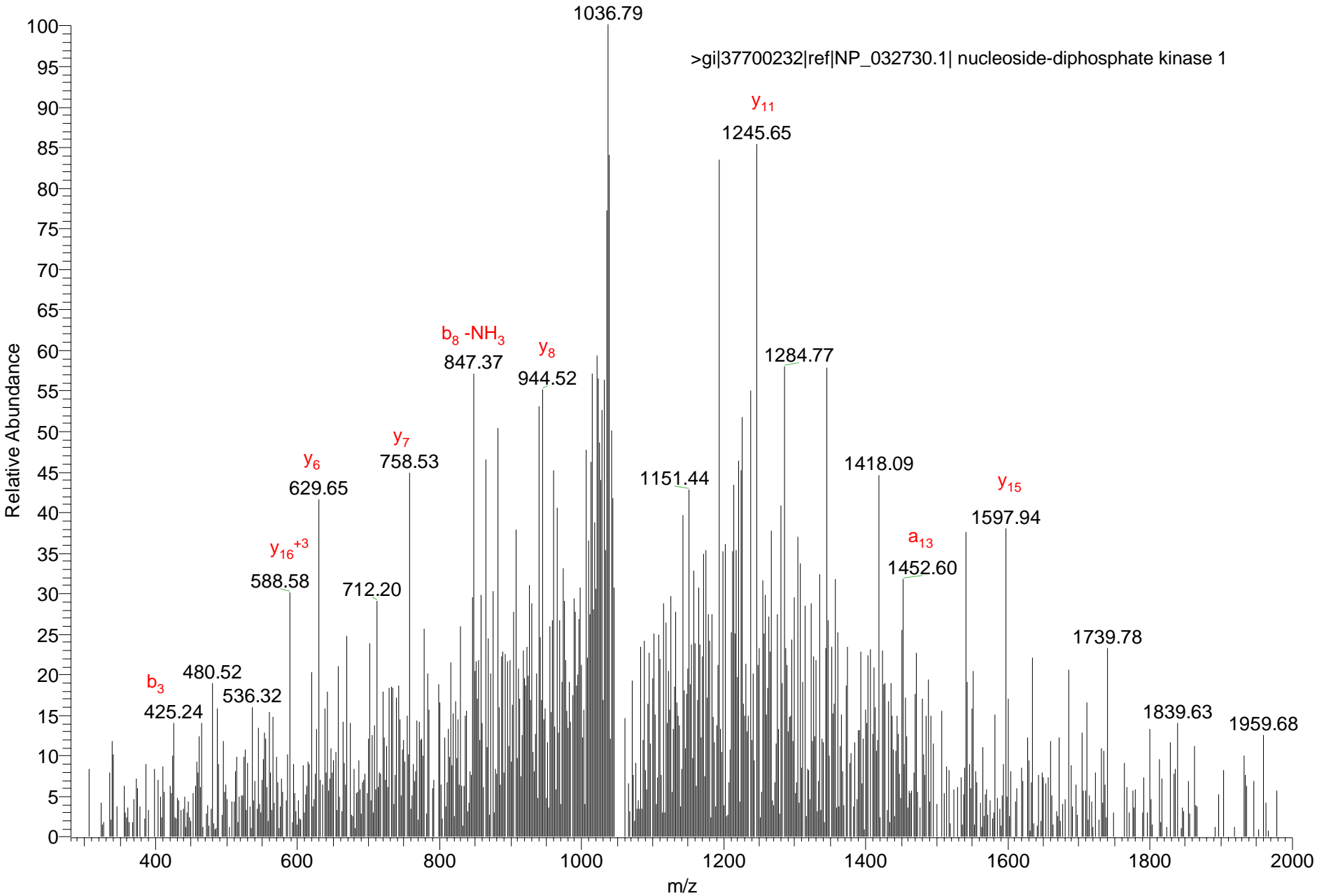


Figure 21

RKAKVTGQRLVSPGSANETSSILVESVTR

>gi|94397798|ref|XP_982436.1| PREDICTED: similar to Filamin-B

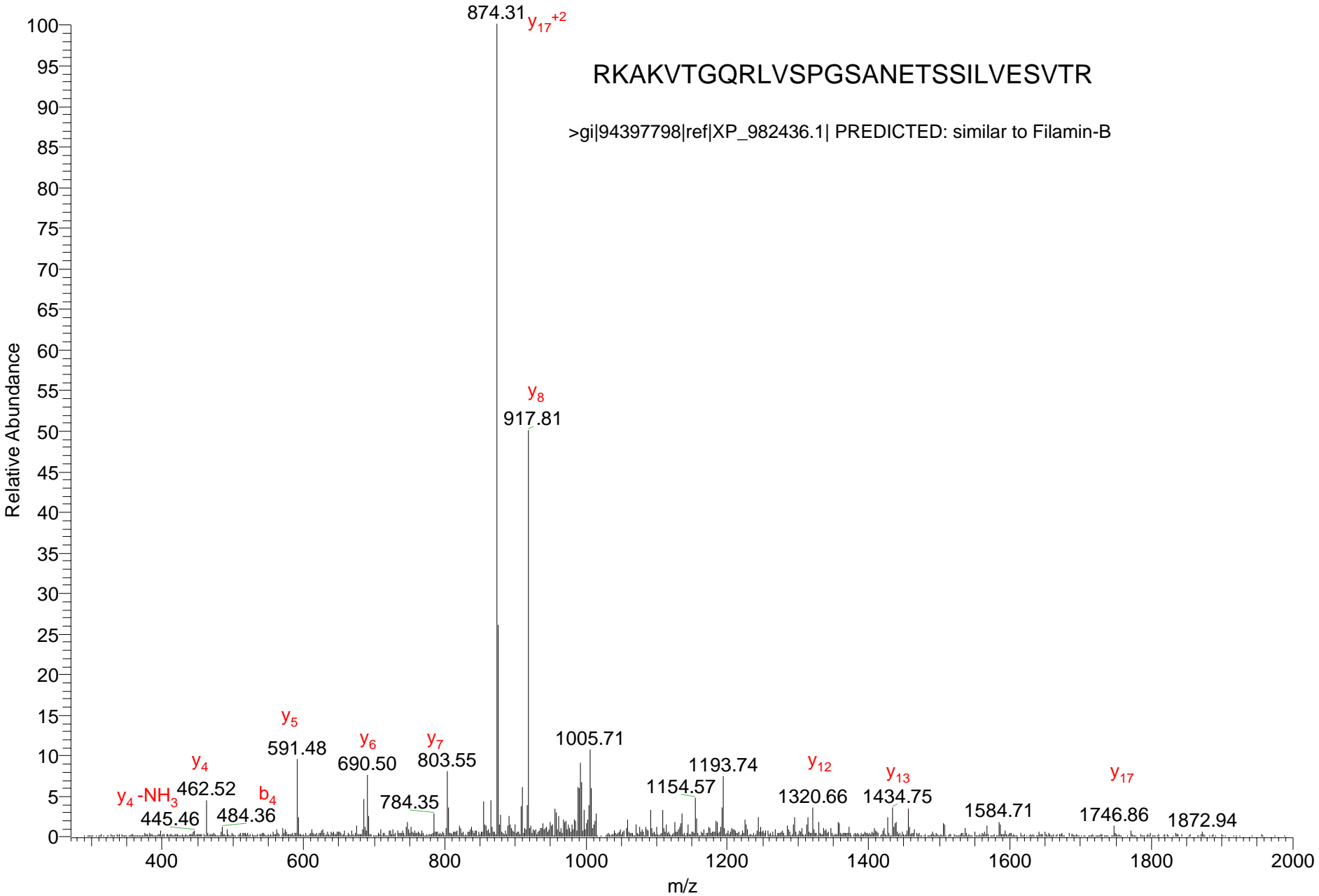


Figure 22

RDIARQVGEDCRTVPLAGHVGFDLPDQLVNK

>gi|123231953|emb|CAM19783.1| septin 6

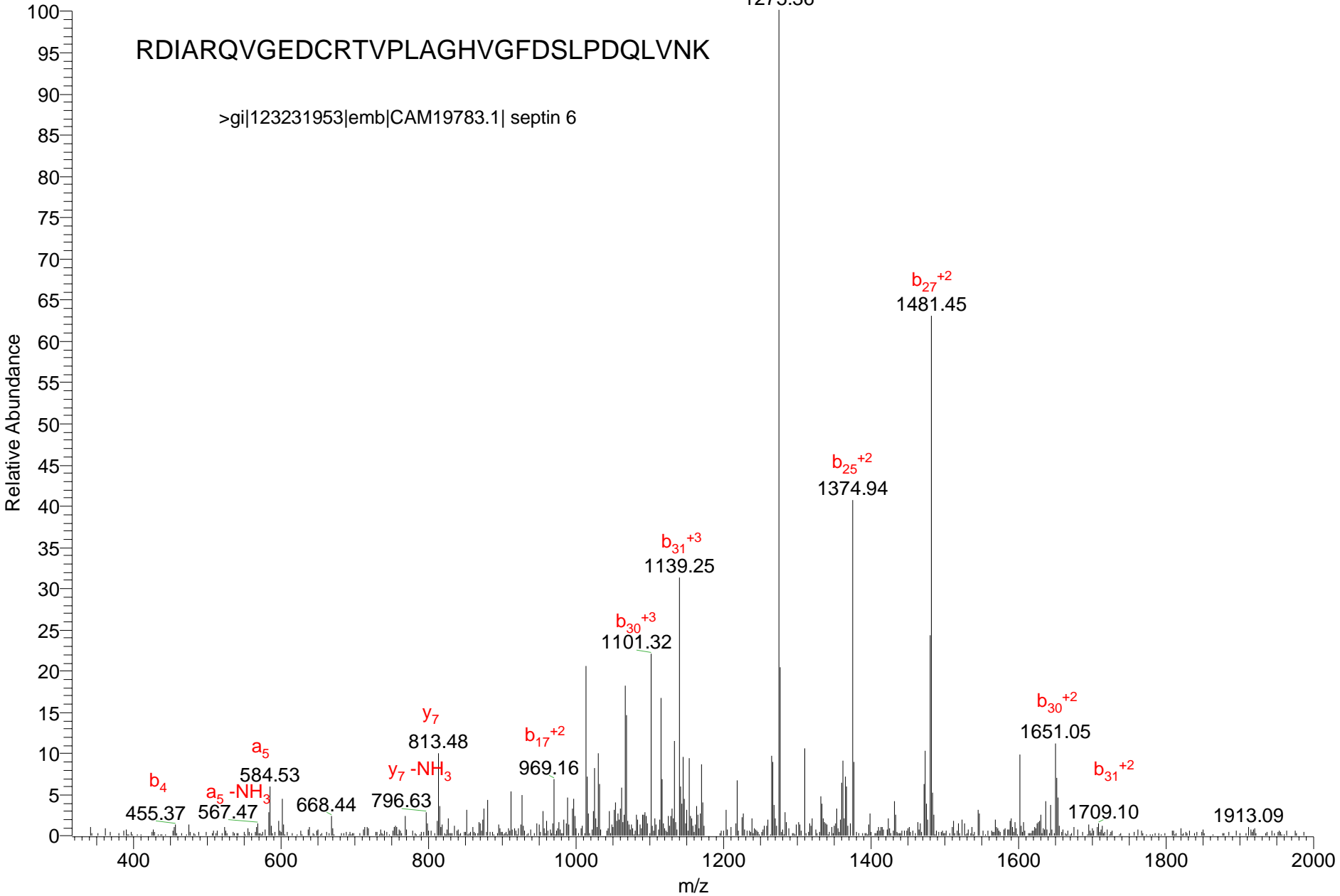


Figure 23

RAVGIDLGTTYSCVGVFQHGK

>gi|42542422|gb|AAH66191.1| Heat shock protein 8

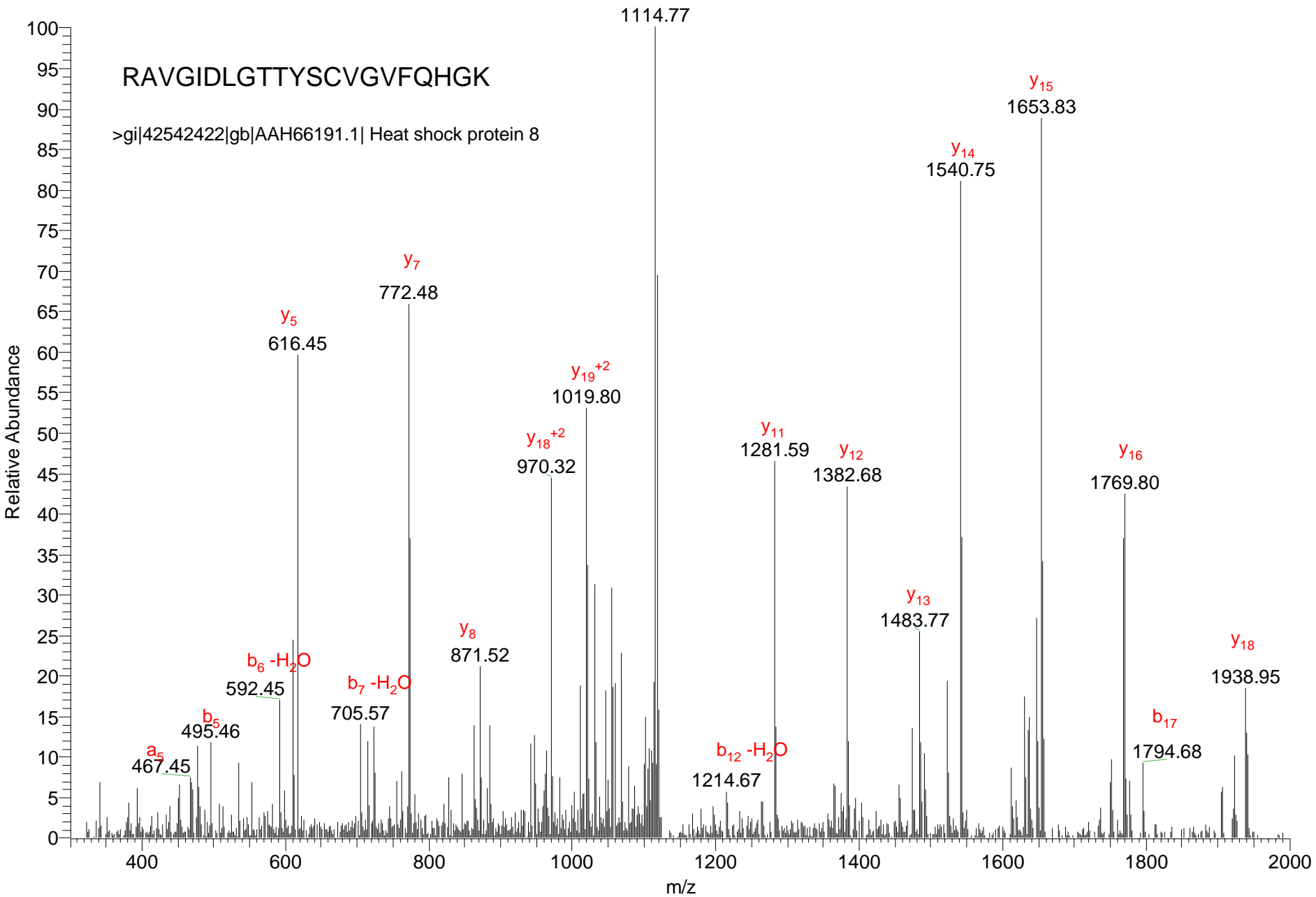


Figure 24

RTLVMERLQQVLQMESHQSTSDR

>gi|30931411|gb|AAH52711.1| Karyopherin (importin) beta 1

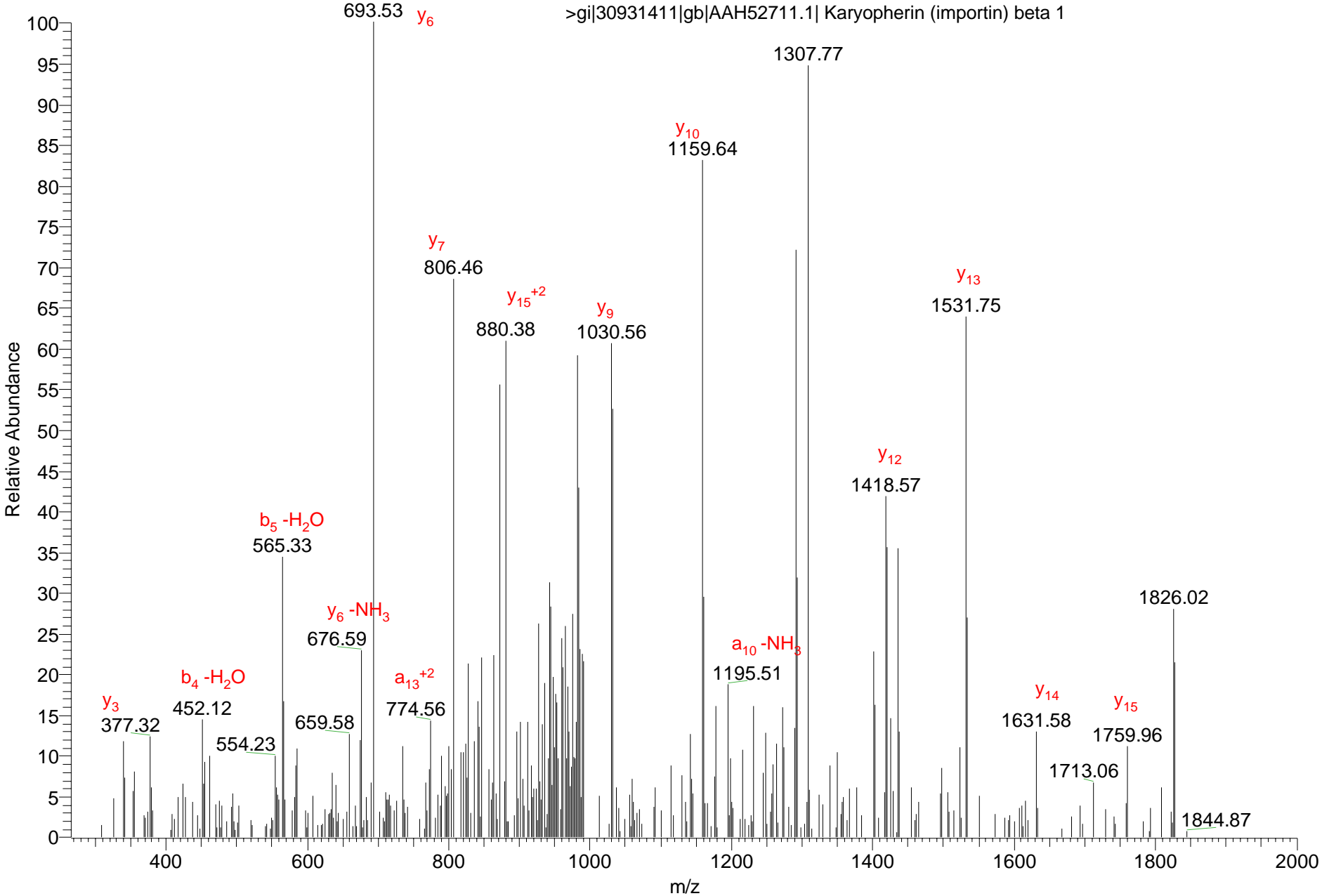


Figure 25

RVLVGDVKDRVAILVDDMADTCGTICHAADK

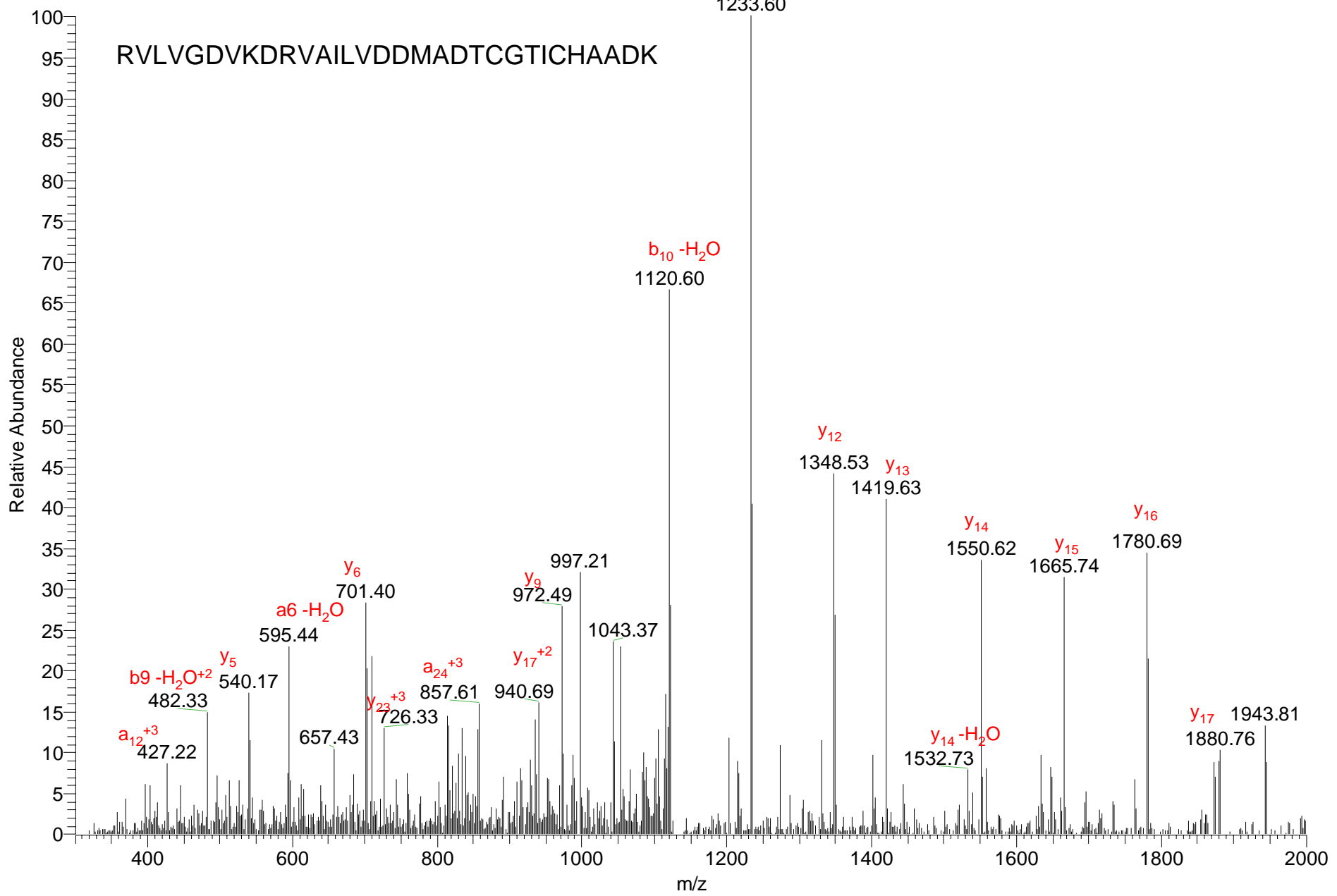


Figure 26

RCQSHRLTVEDPVTVEYITR

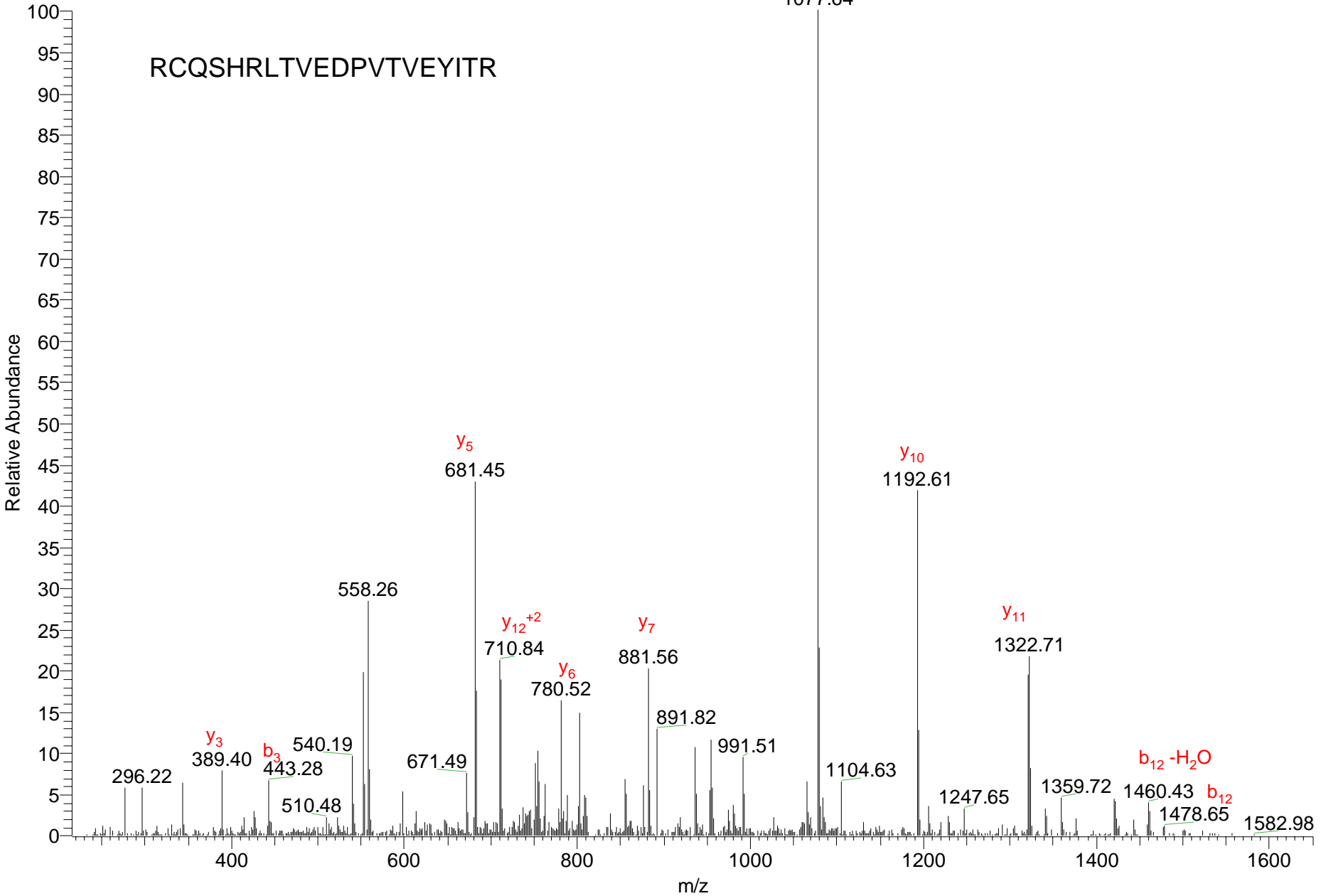


Figure 27

>gi|61098124|ref|NP_080896.2| family with sequence similarity 98, member B

RELGPETSMEGDVLDLTLEALGYK

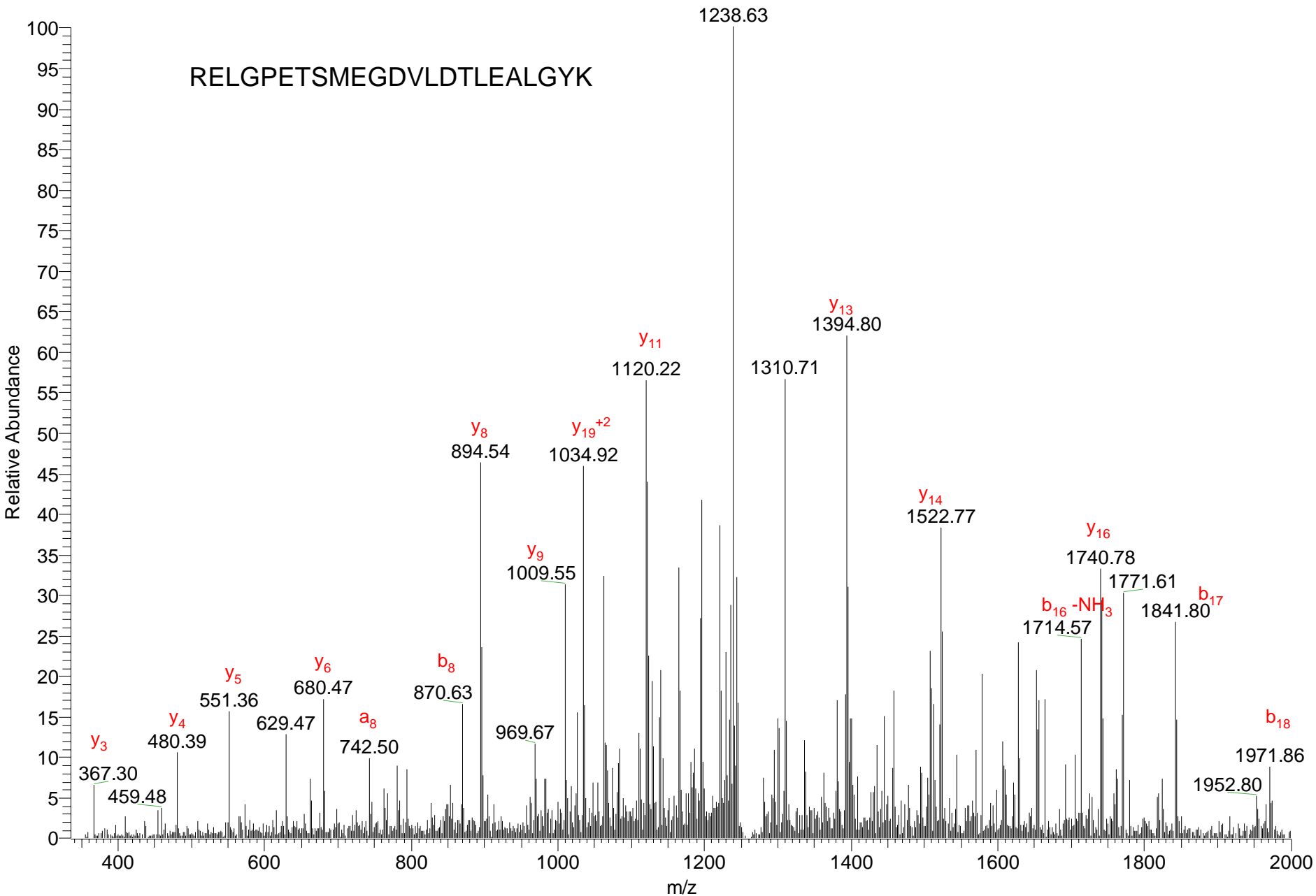


Figure 28

RTTENS LVALSVPAEDDTCNSQVK

>gi|21619381|gb|AAH31490.1| Lima1 protein

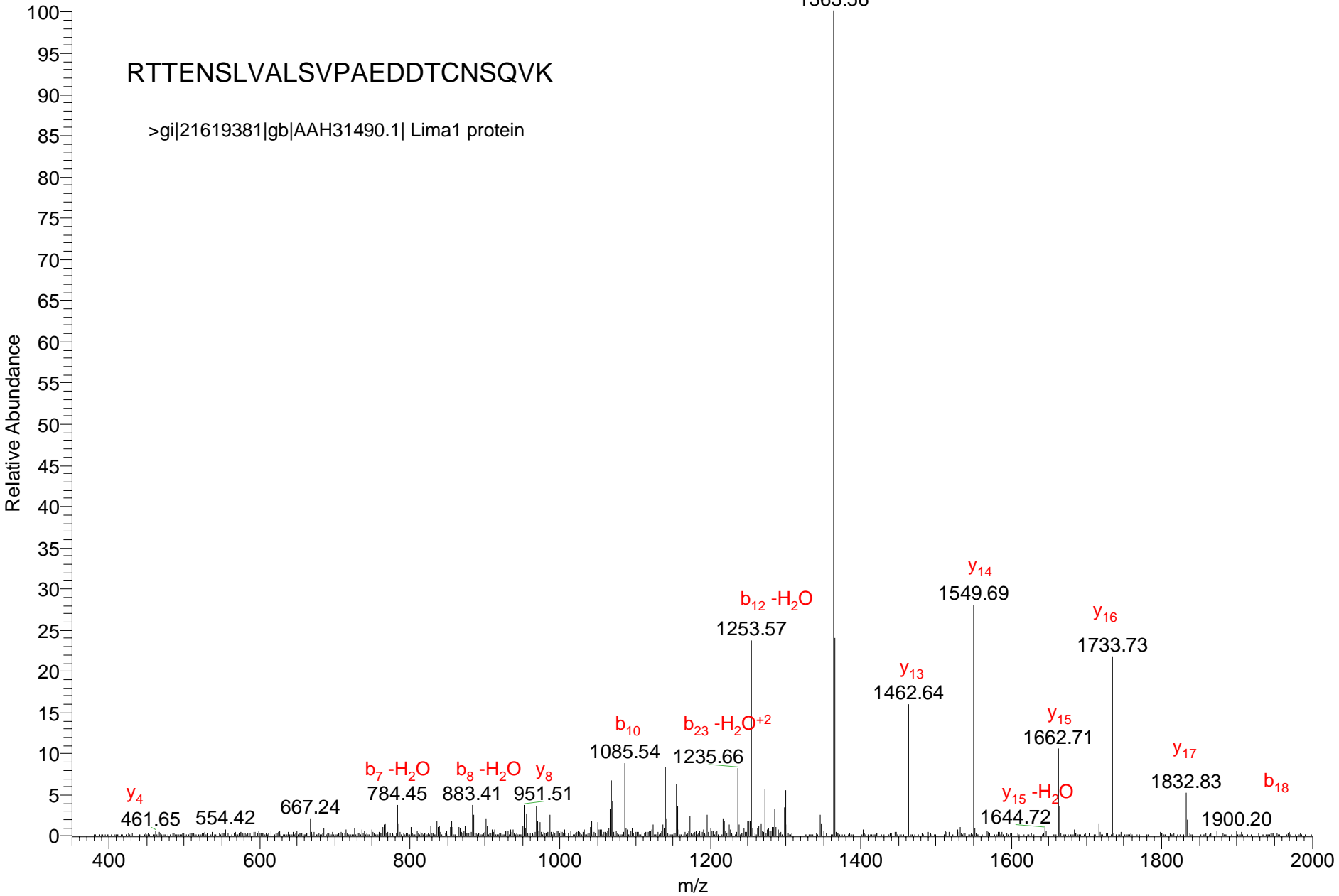


Figure 29

RTSDVANAVLDGADCIMLSGETAK

>gi|8567390|ref|NP_038659.1| pyruvate kinase liver and red blood cell

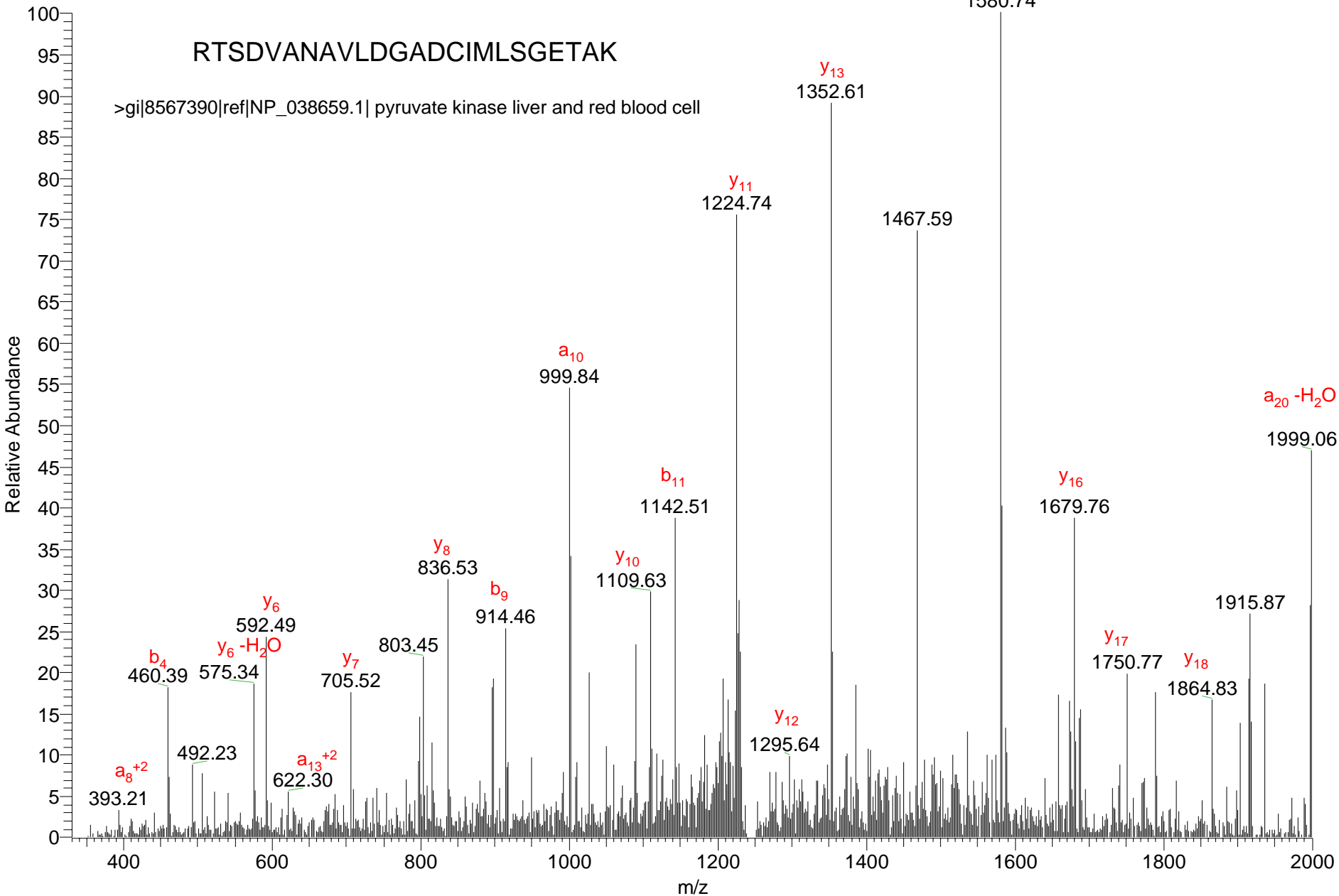


Figure 30

RLVKKRALIAGGGAPEIELALR

>gi|460317|gb|AAA37418.1| chaperonin

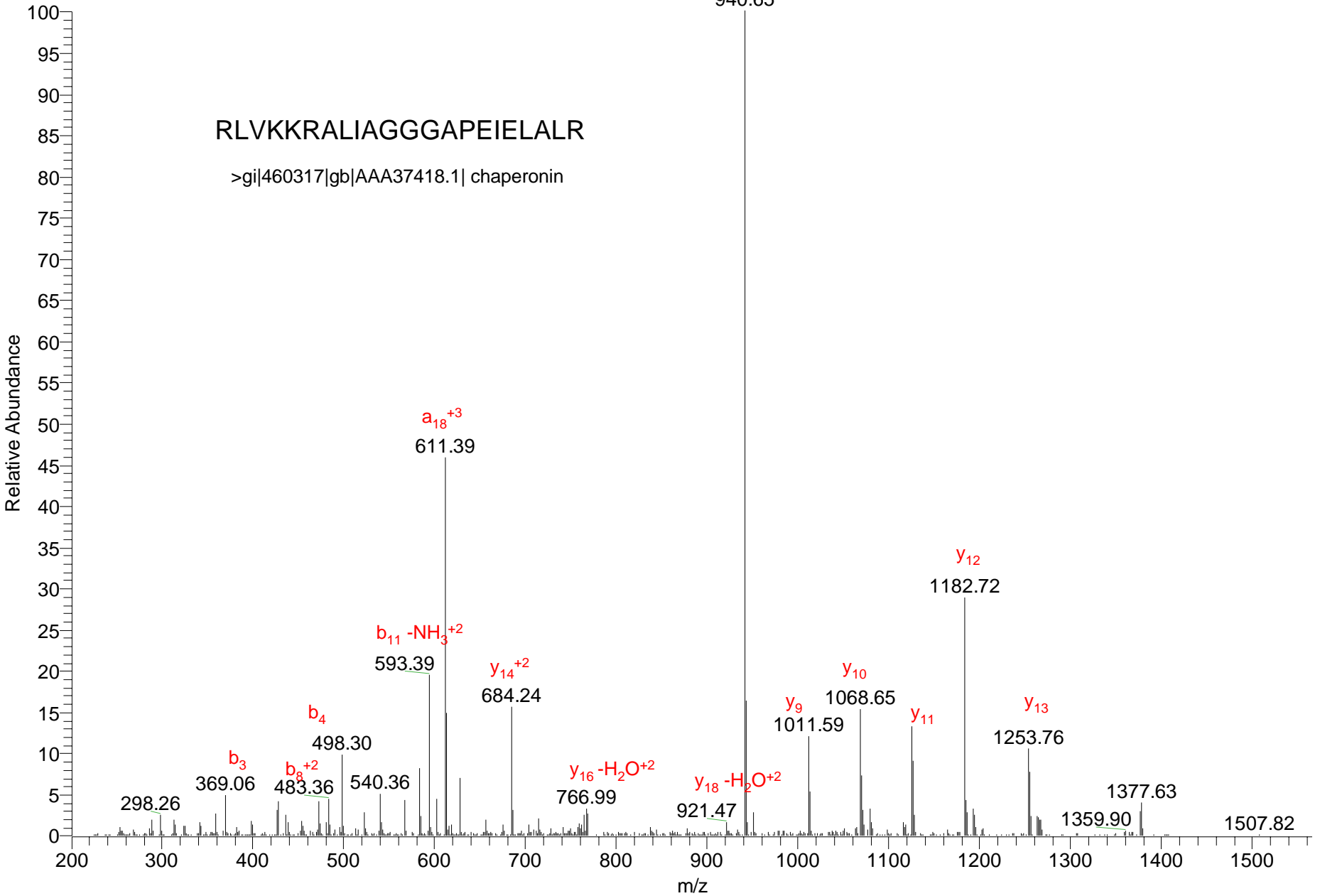


Figure 31

RTLVA SEDYGD TLAAIQGLLK

>gi|94366368|ref|XP_993410.1| PREDICTED: spectrin alpha 2 isoform 3

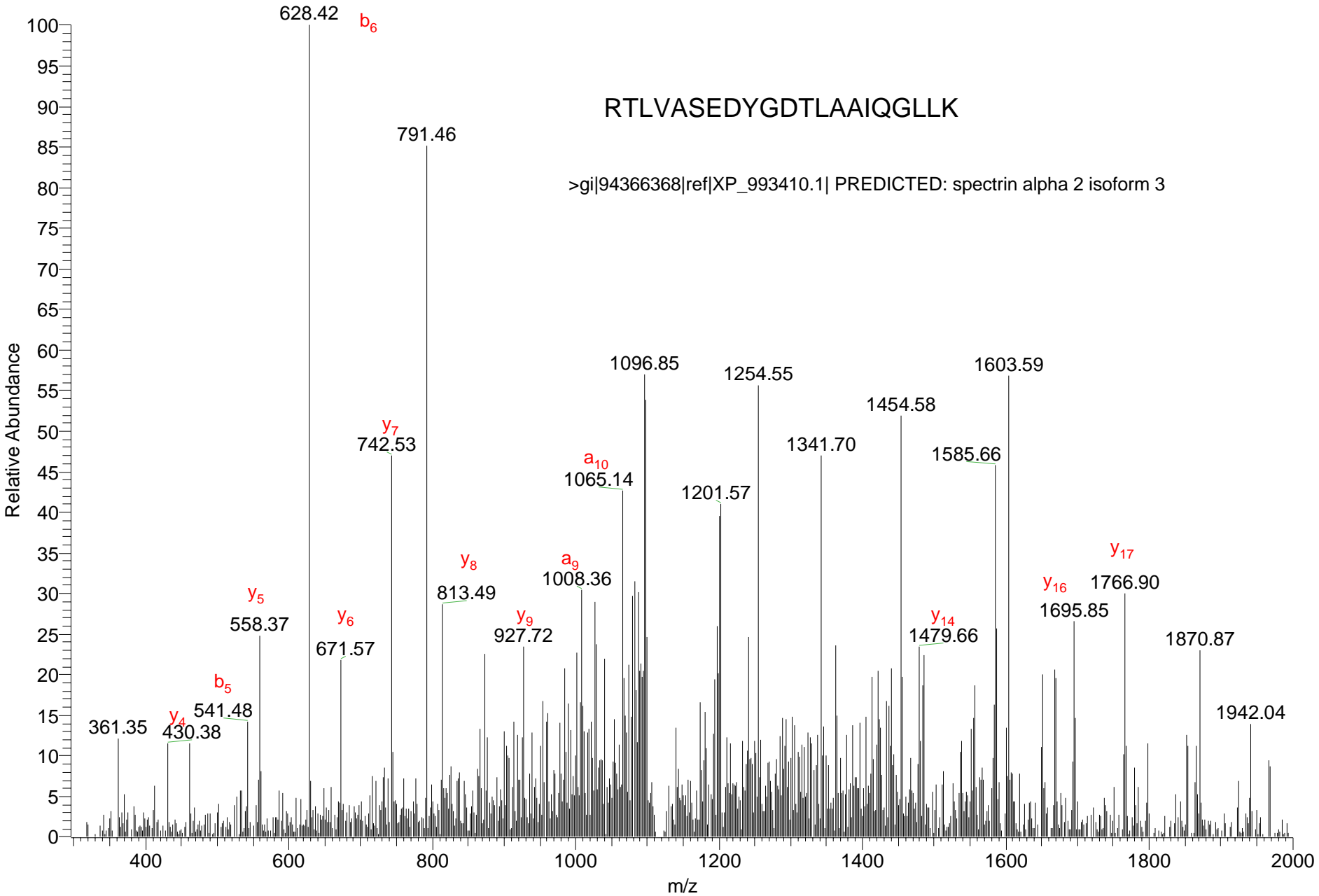


Figure 32

>gi|21426823|ref|NP_085112.1| histone 1, H1a

RLAALKKSLAAAGYDVEKNNSR

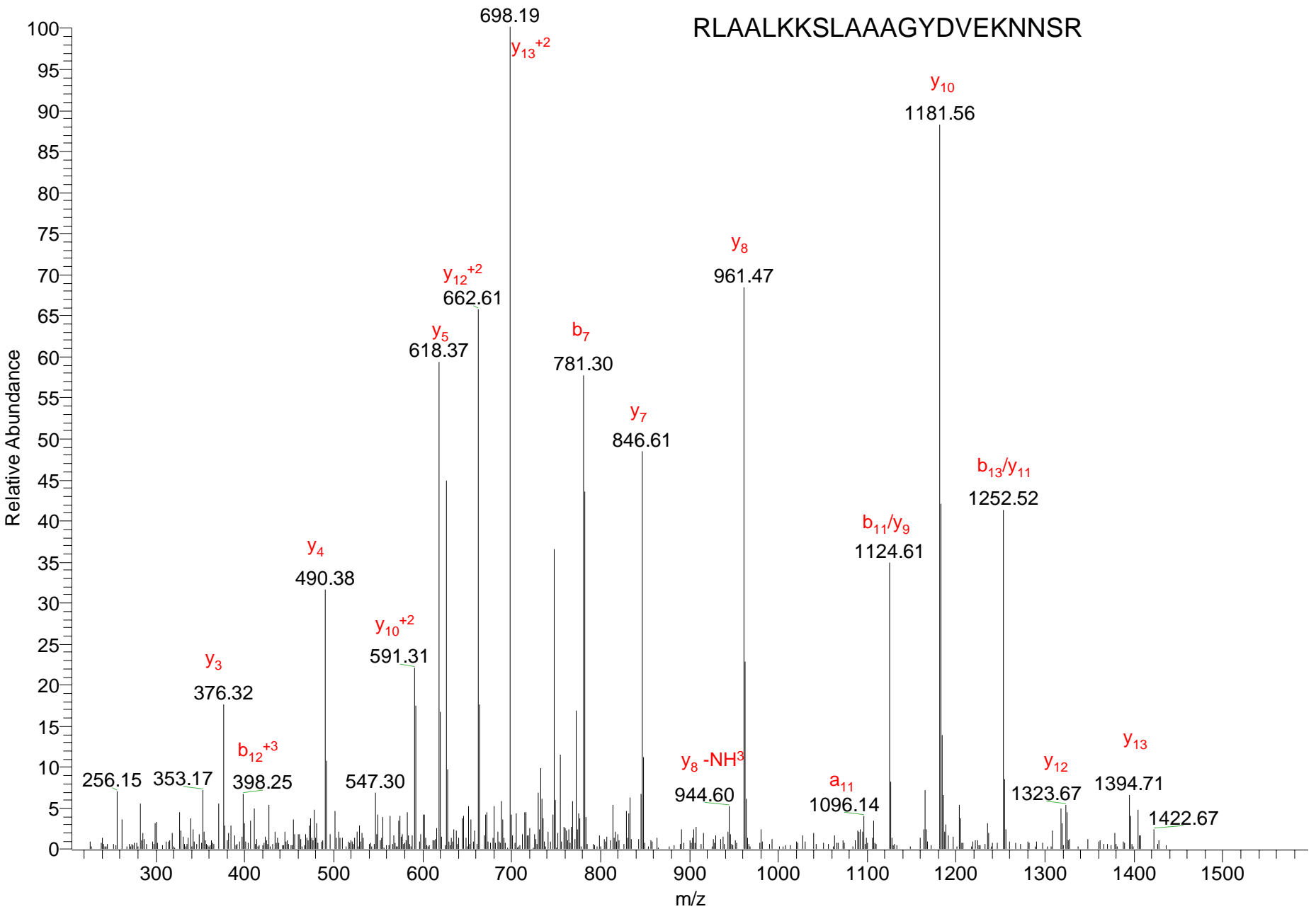


Figure 33

RSVVHSTDLVVEAIVENLK

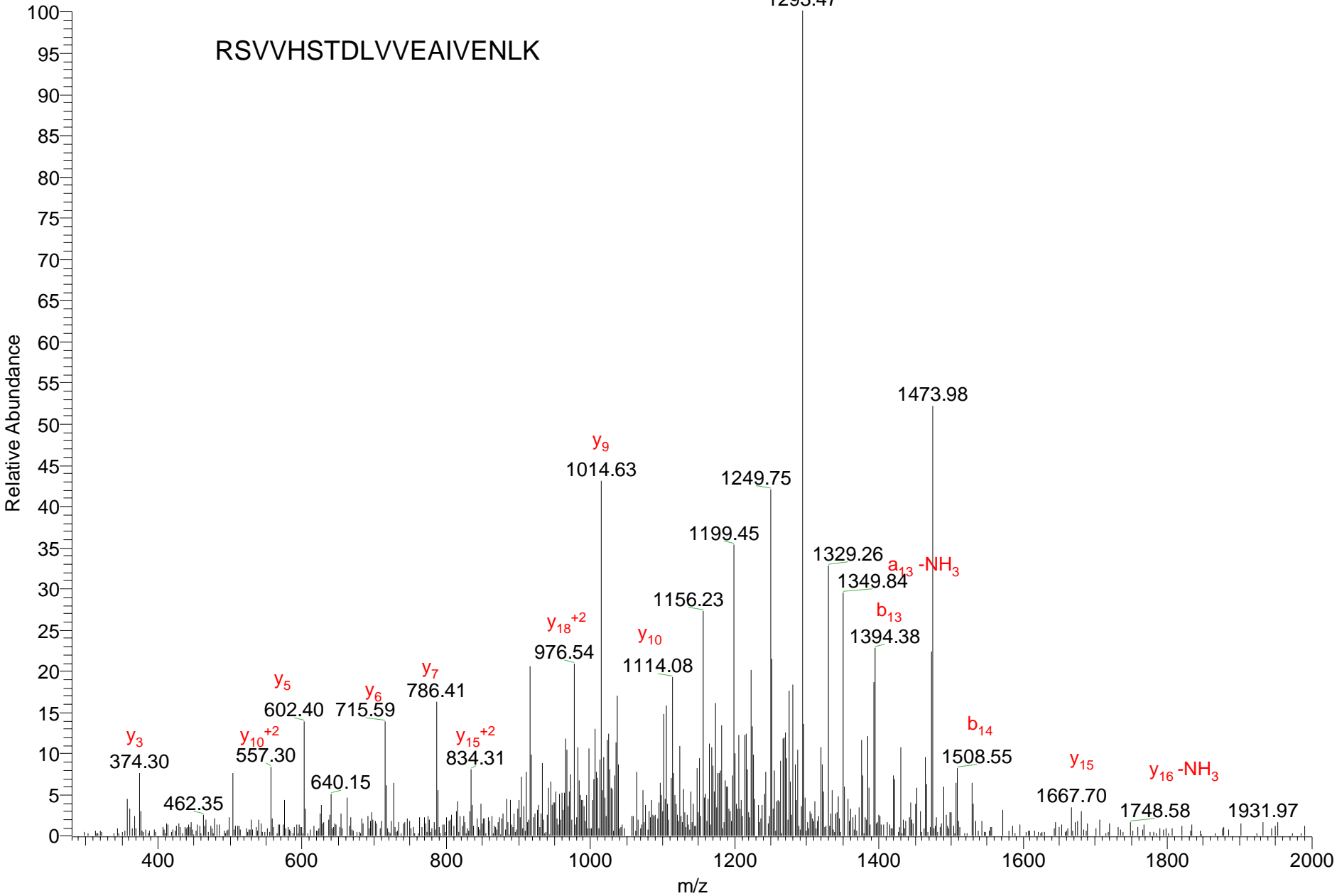


Figure 34

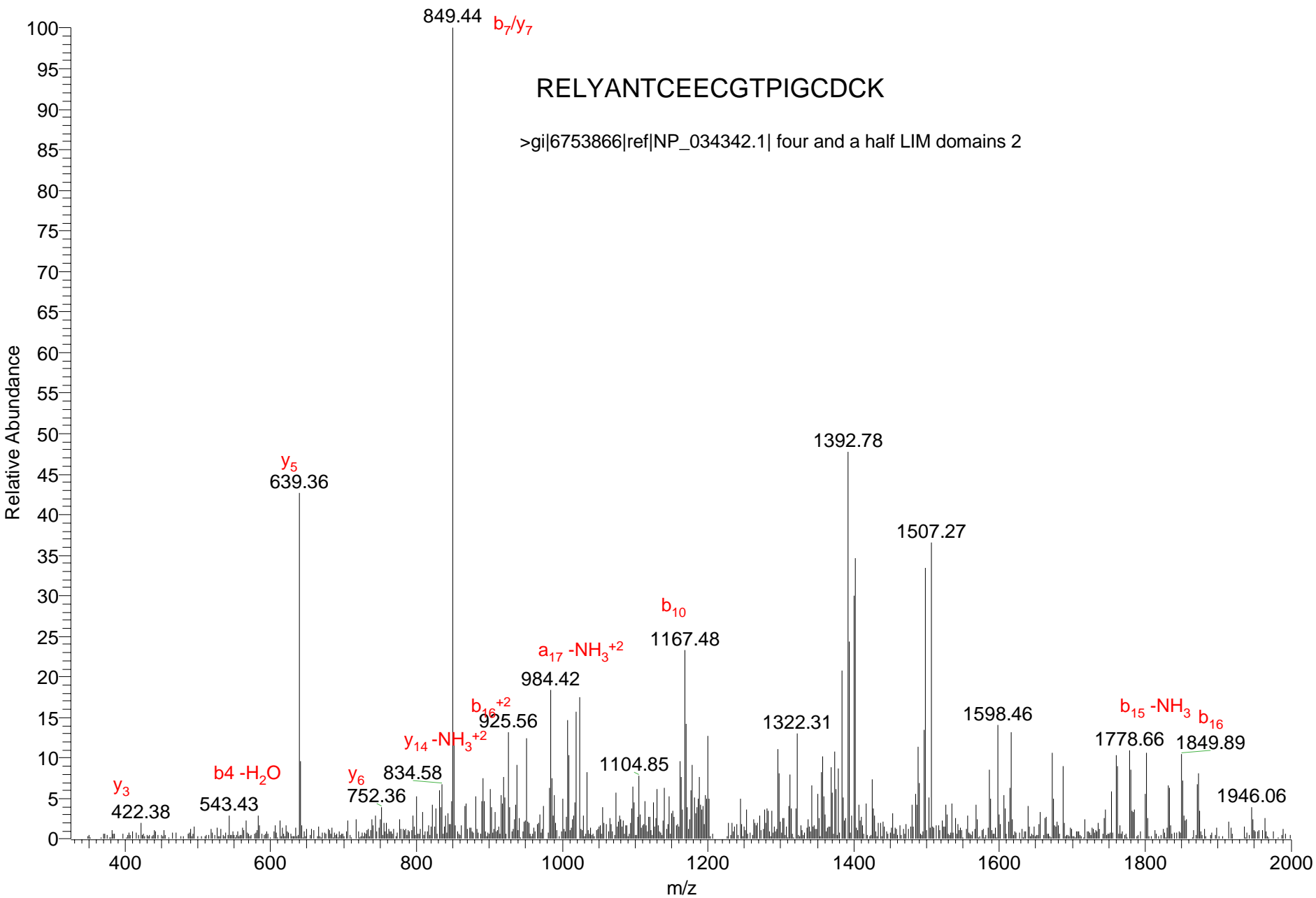


Figure 35

RNSNIDQSFWETFGSAEPPK

>gi|31542139|ref|NP_665703.2| ADP-ribosylation factor GTPase activating protein 1

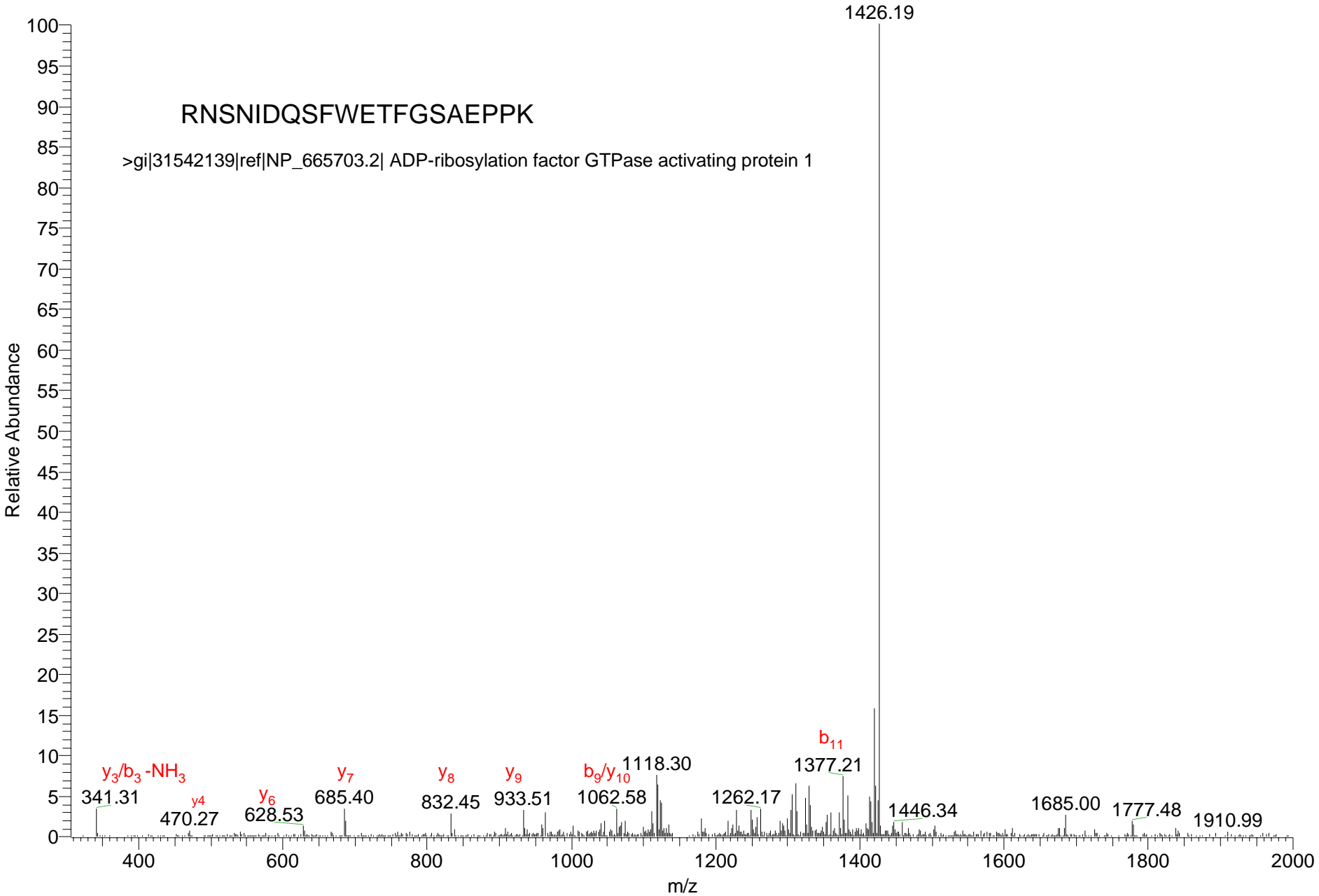


Figure 36

RFYGGNGIVGAQVPLGAGIALACK

>gi|6679261|ref|NP_032836.1| pyruvate dehydrogenase E1 alpha 1

Relative Abundance

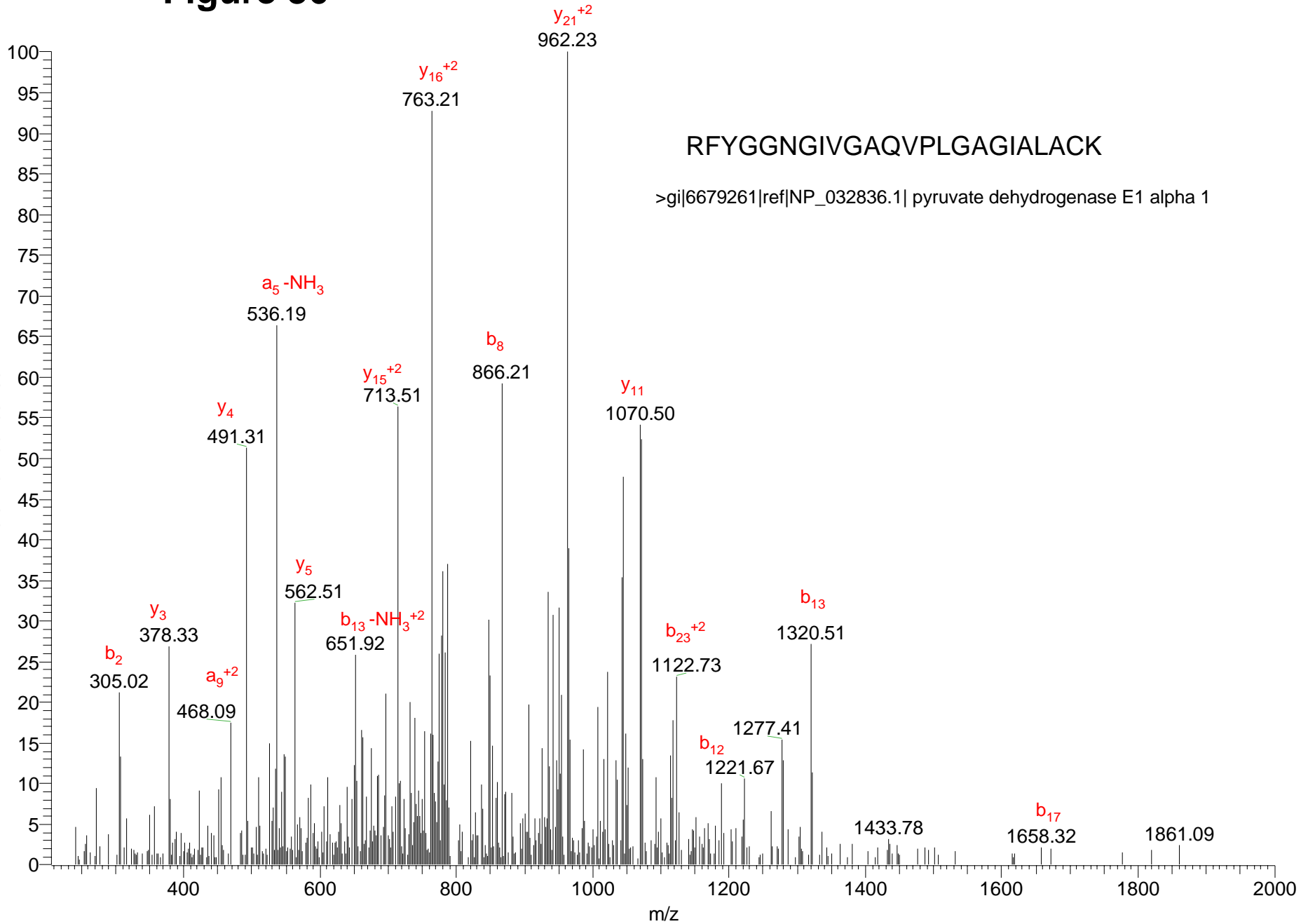


Figure 37

>gi|20137006|ref|NP_071855.1| myosin, heavy polypeptide 9, non-muscle isoform 1

RLPIYSEEIVEMYK

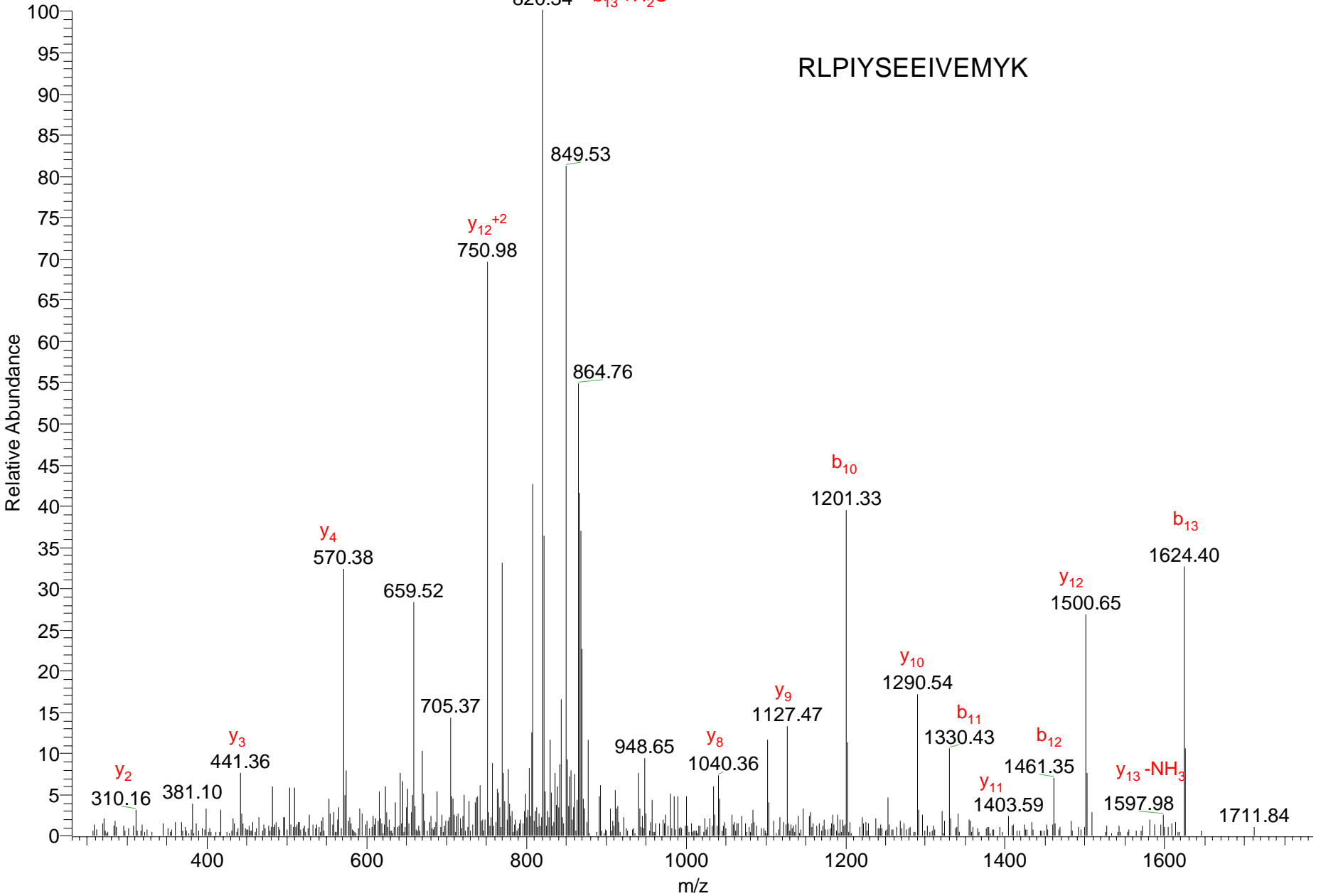


Figure 38

>gi|6677833|ref|NP_033138.1| S100 calcium binding protein A10 (calpactin)

RSQMEHAMETMMLTFHR

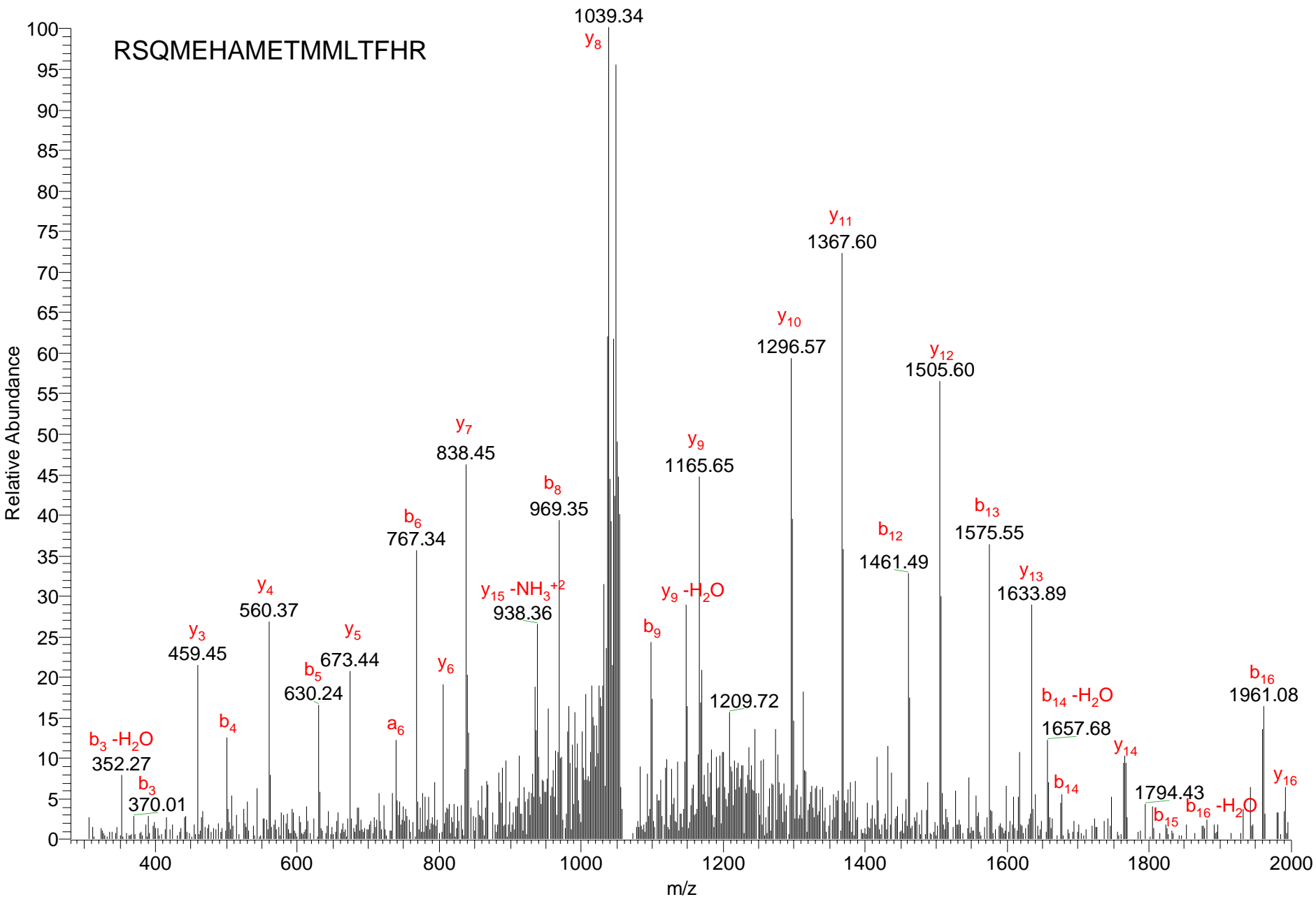


Figure 39

RWIGLAEAMGTLMHAWAGSPK

>gi|52353955|ref|NP_058662.2| 3-phosphoglycerate dehydrogenase

Relative Abundance

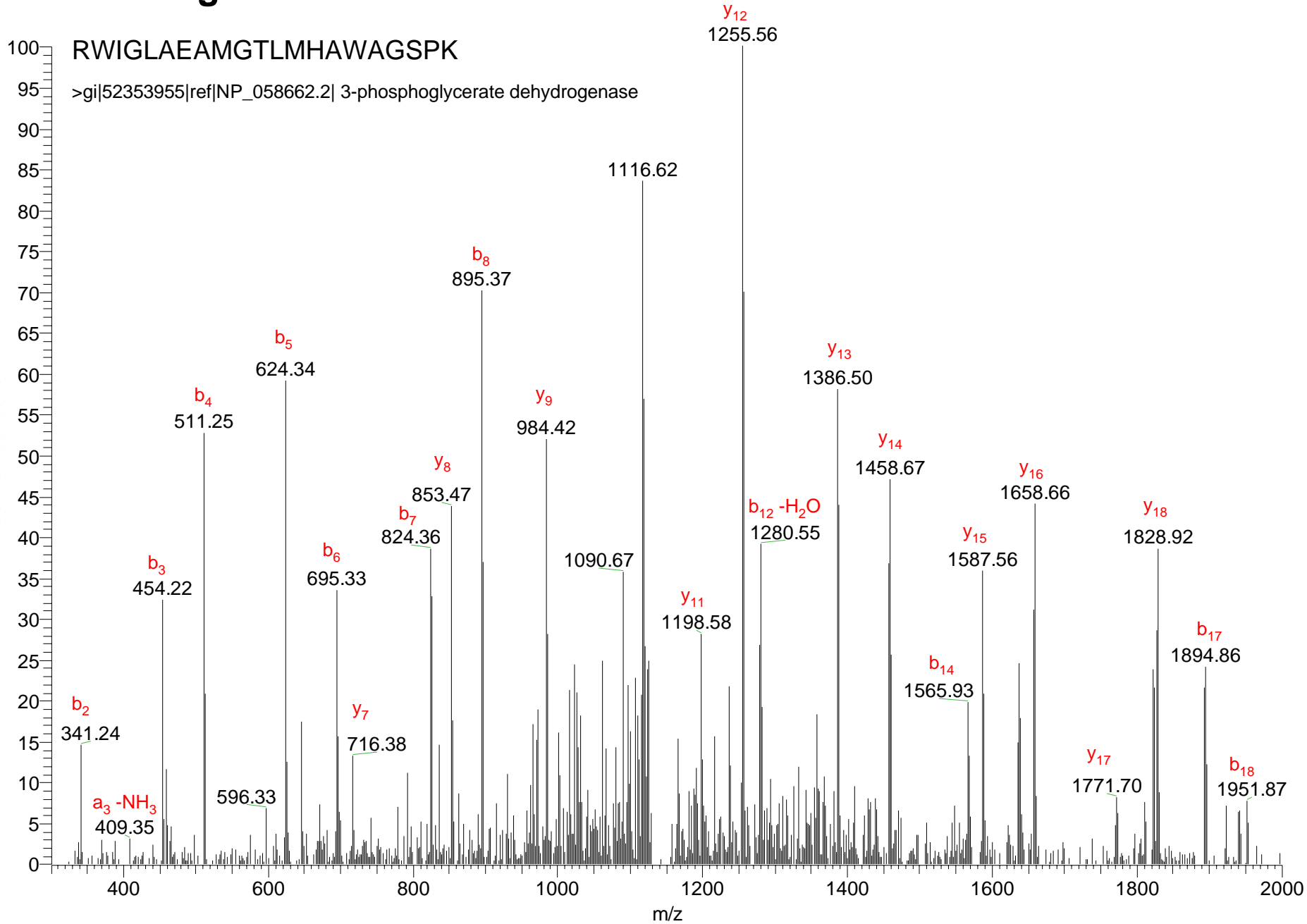


Figure 40

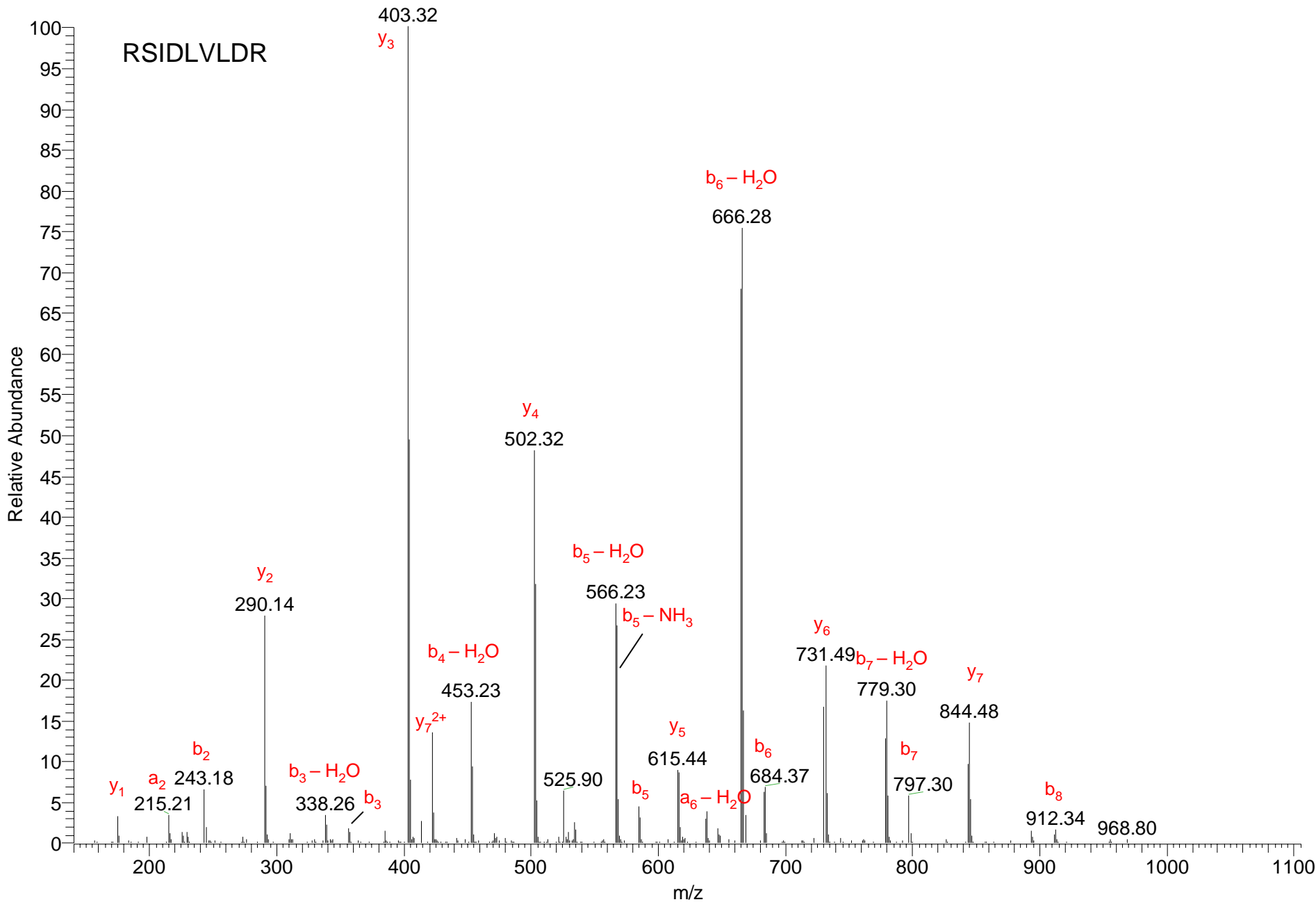


Figure 41

RGEAGVTLGQPHLSR

>gi|7674081|sp|Q9Z0N2|IF2H_MOUSE Eukaryotic translation initiation factor 2 subunit 3, Y-linked (Eukaryotic translation initiation factor 2 gamma subunit, Y-linked) (eIF-2-gamma Y)

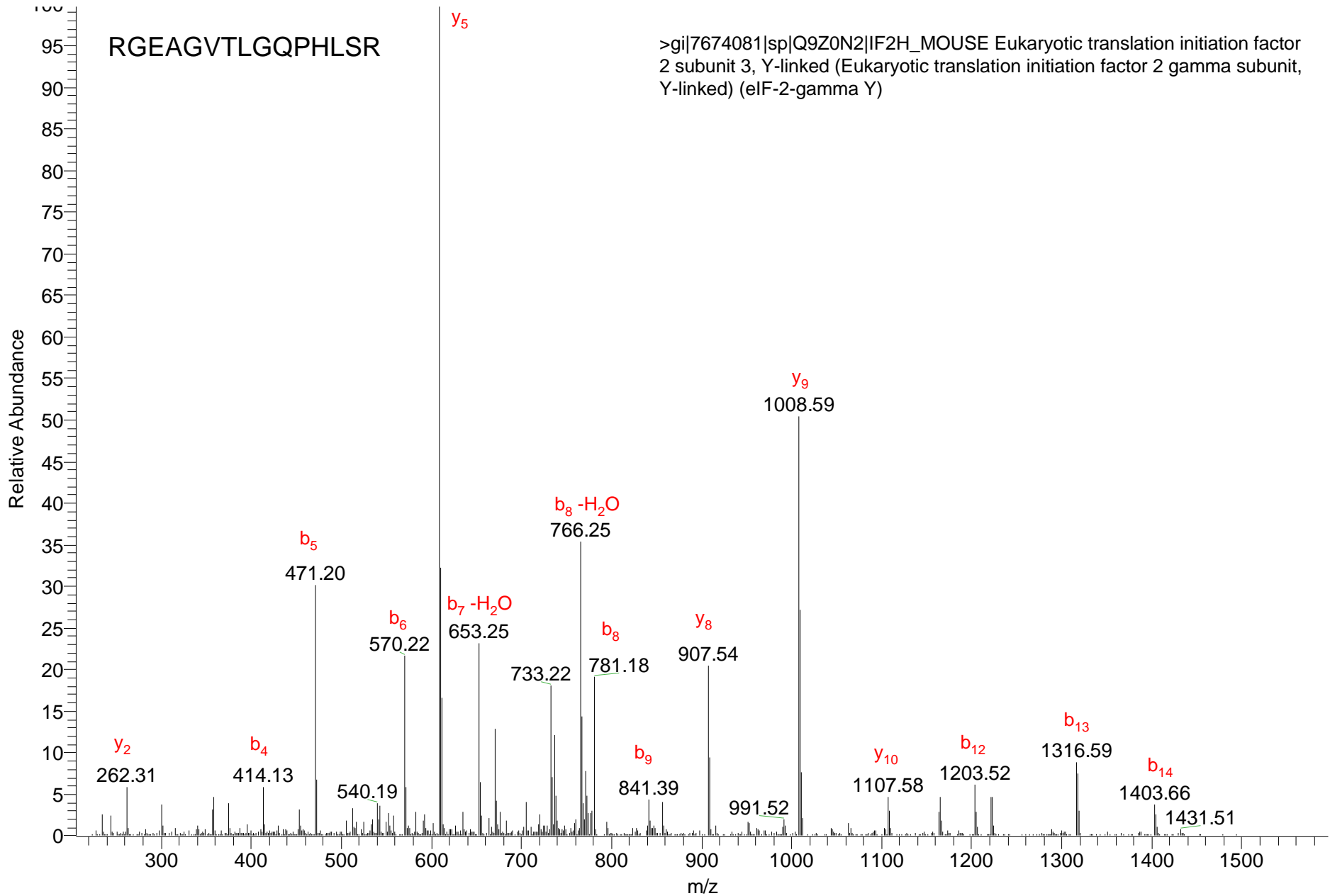


Figure 42

RSEAGAEYVVESTGVFTTMEK

>gi|94406246|ref|XP_999161.1| PREDICTED: similar to
Glyceraldehyde-3-phosphate dehydrogenase (GAPDH)

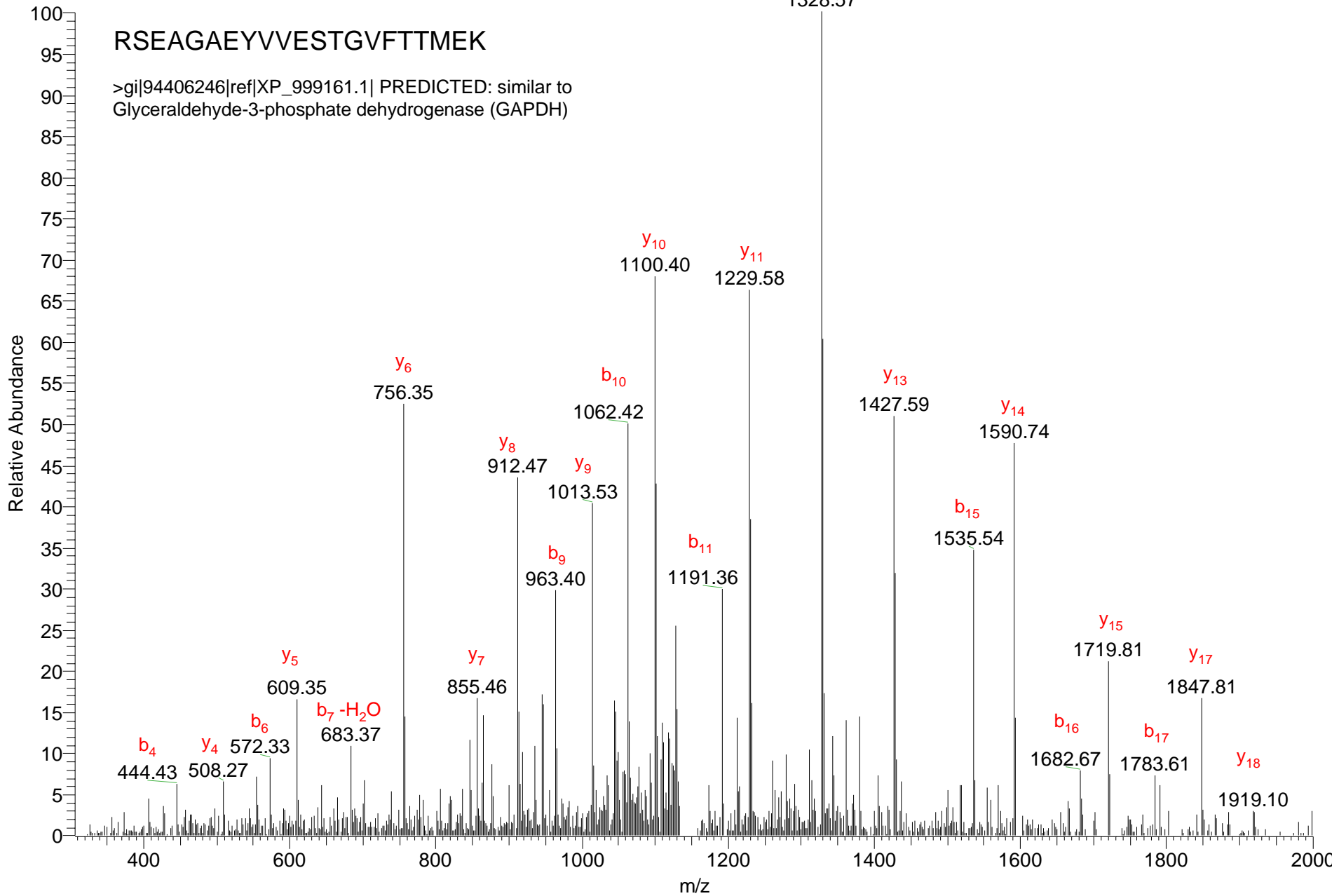


Figure 43

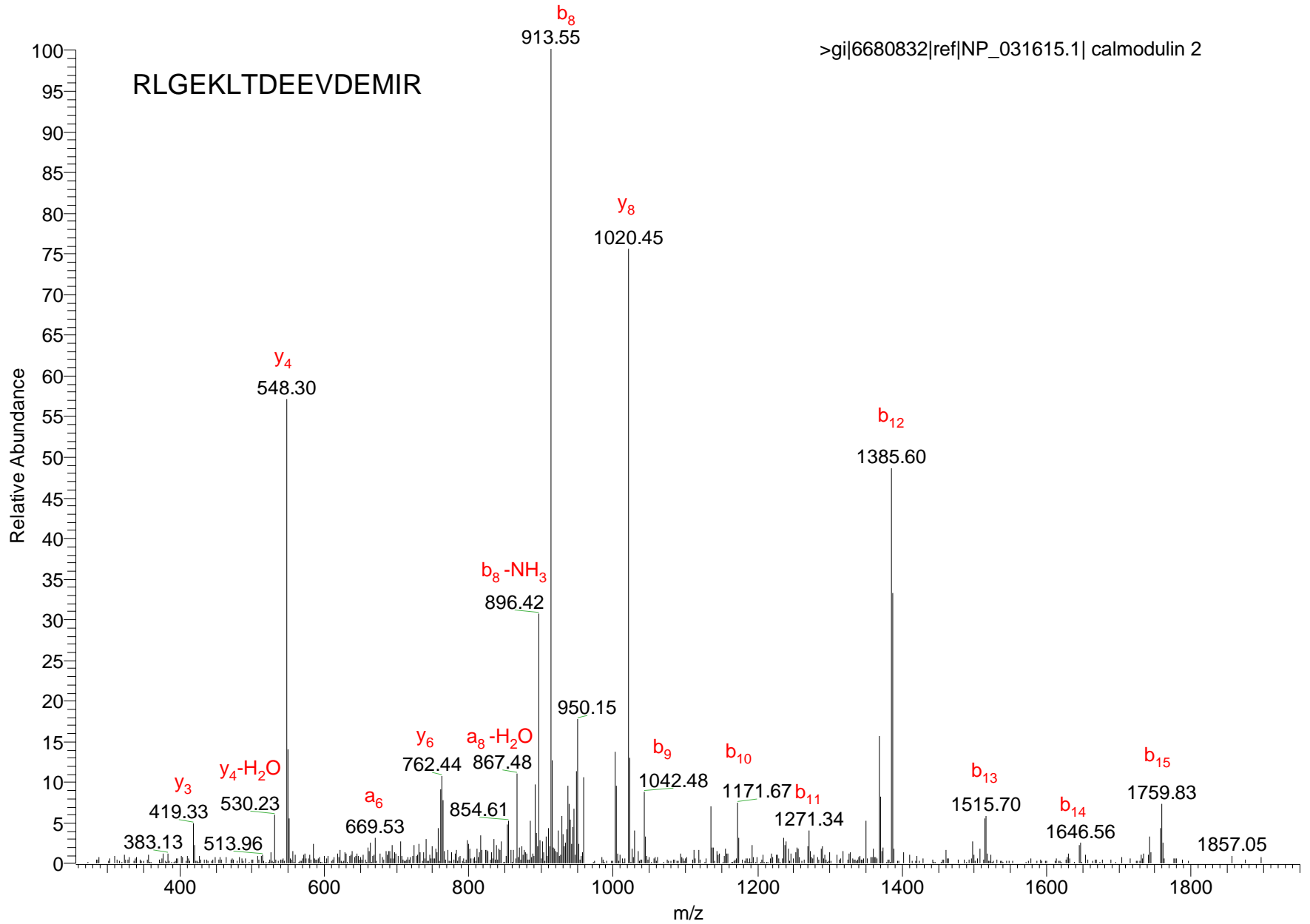


Figure 44

RCMGQIICNLGDNLGPDLSENTLQIFLER

>gi|94388698|ref|XP_125901.7| PREDICTED: TBP-interacting protein isoform 1

Relative Abundance

