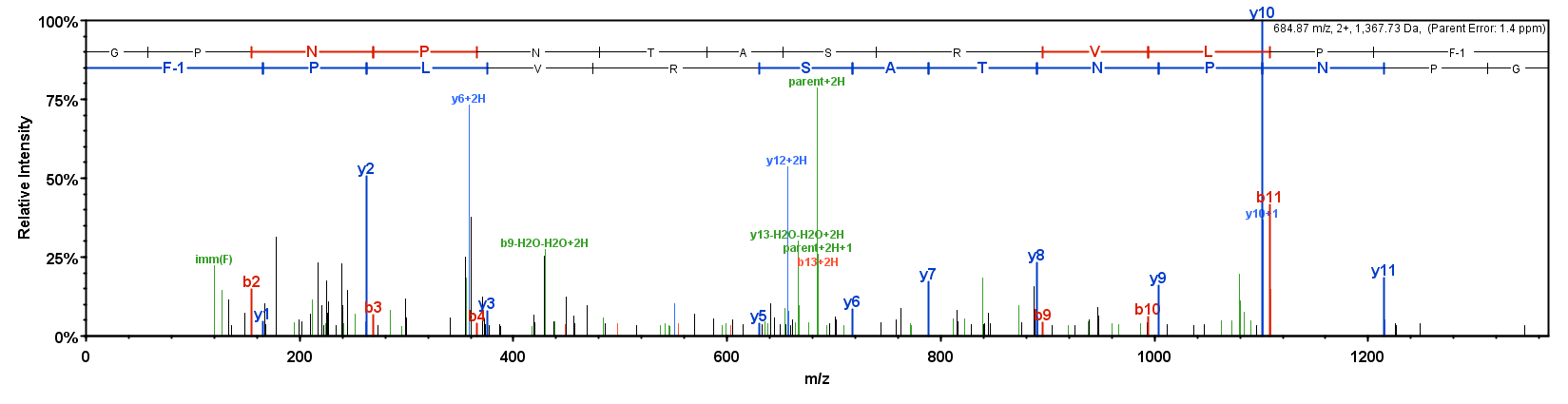
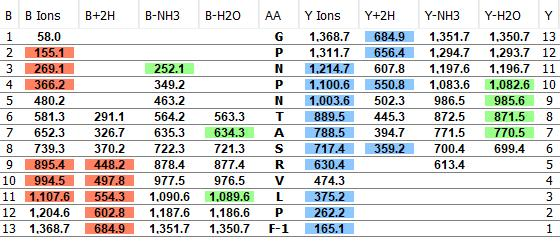
Ai

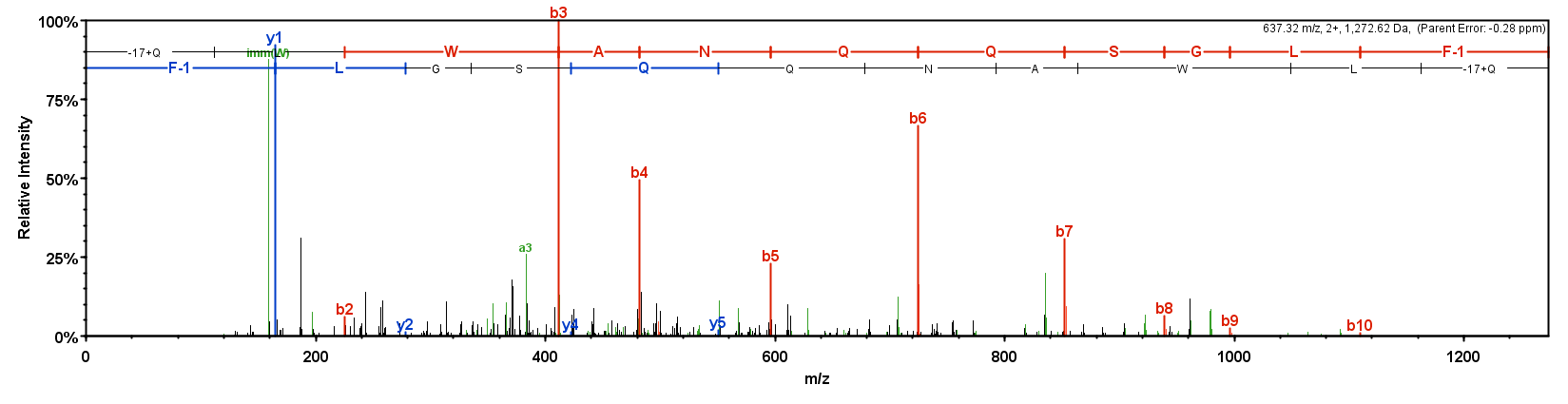


Aii



Supplementary Figure 4A (i) Mass spectrum derived from MS/MS analysis of the peptide ArKP1 (GPNPNTASRVLPF-NH2) present in a methanol acetic acid extract of radial nerve cords from *Asterias rubens*. (ii) MS/MS data is shown with the b series of fragment ions in red, fragment ions from the y series in blue, and other identified fragment ions in green.

Bi



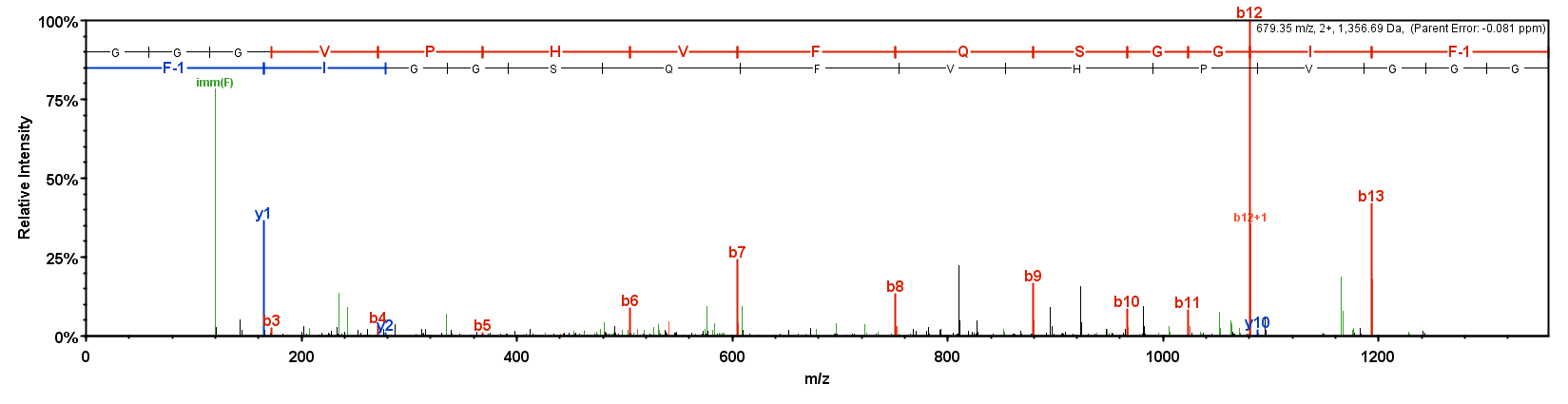
Bii

Table

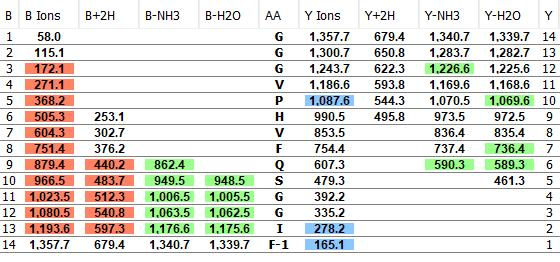
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Supplementary Figure 4B (i) Mass spectrum derived from MS/MS analysis of the peptide ArKP2.1 (ArKP2.1; pQLWANQQSGLF-NH2) present in a methanol acetic acid extract of radial nerve cords from *Asterias rubens*. (ii) MS/MS data is shown with the b series of fragment ions in red, fragment ions from the y series in blue, and other identified fragment ions in green.

Ci

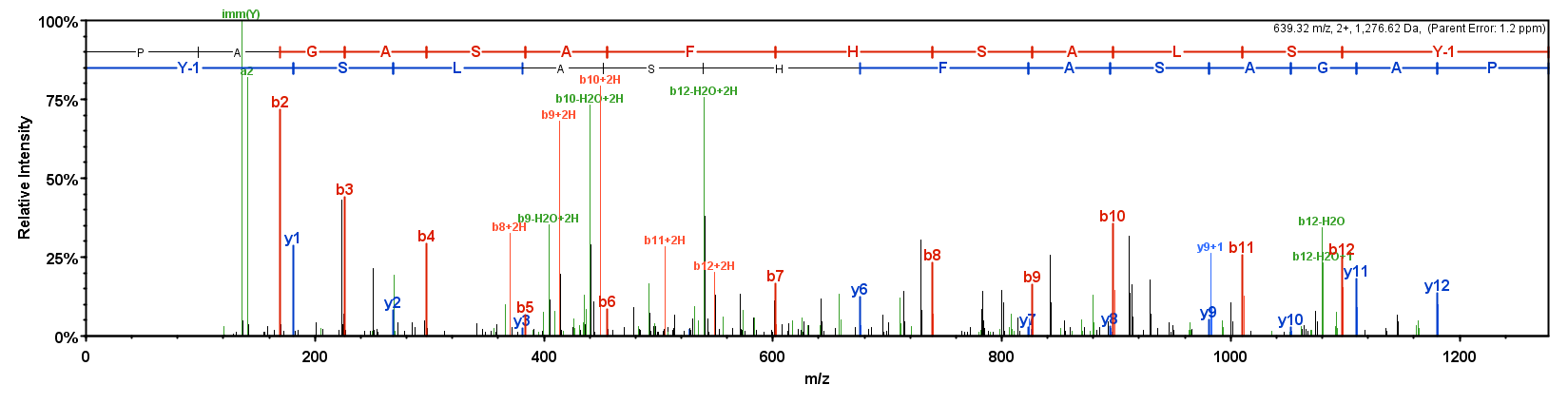


Cii

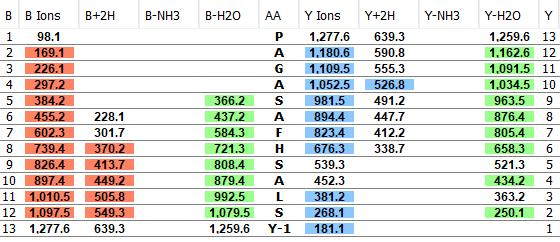


Supplementary Figure 4C (i) Mass spectrum derived from MS/MS analysis of the peptide ArKP2.2 (ArKP2.2; GGGVPHVFQSGGIF-NH2) present in a methanol acetic acid extract of radial nerve cords from *Asterias rubens*. (ii) MS/MS data is shown with the b series of fragment ions in red, fragment ions from the y series in blue, and other identified fragment ions in green.

Di

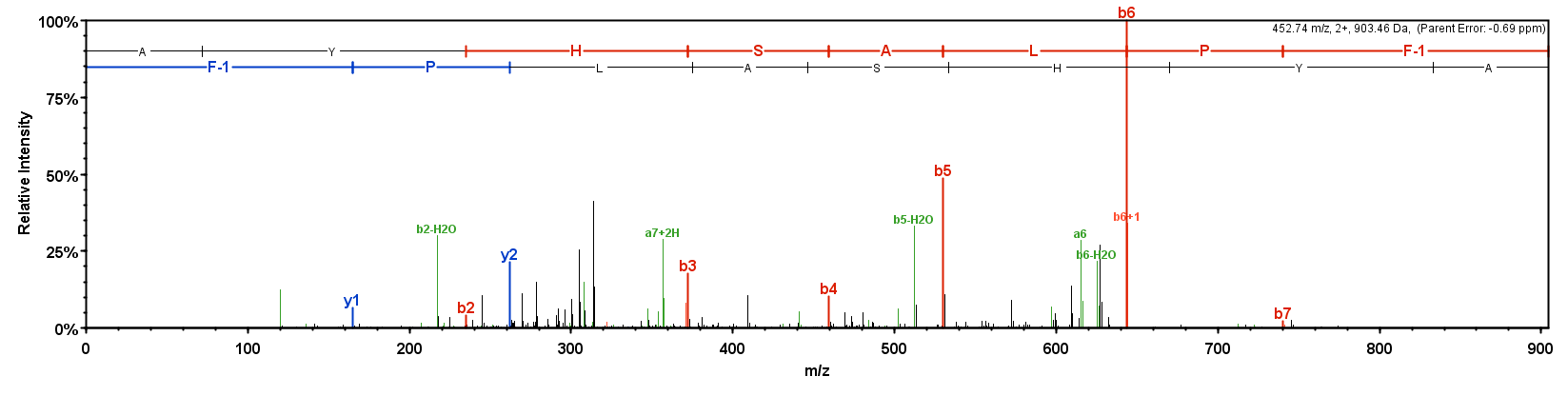


Dii

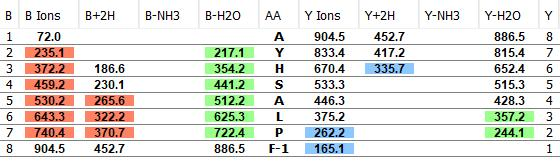


Supplementary Figure 4D (i) Mass spectrum derived from MS/MS analysis of the peptide ArS1.1 (PAGASAFHSALSY-NH2) present in a methanol acetic acid extract of radial nerve cords from *Asterias rubens*. (ii) MS/MS data is shown with the b series of fragment ions in red, fragment ions from the y series in blue, and other identified fragment ions in green.

Ei

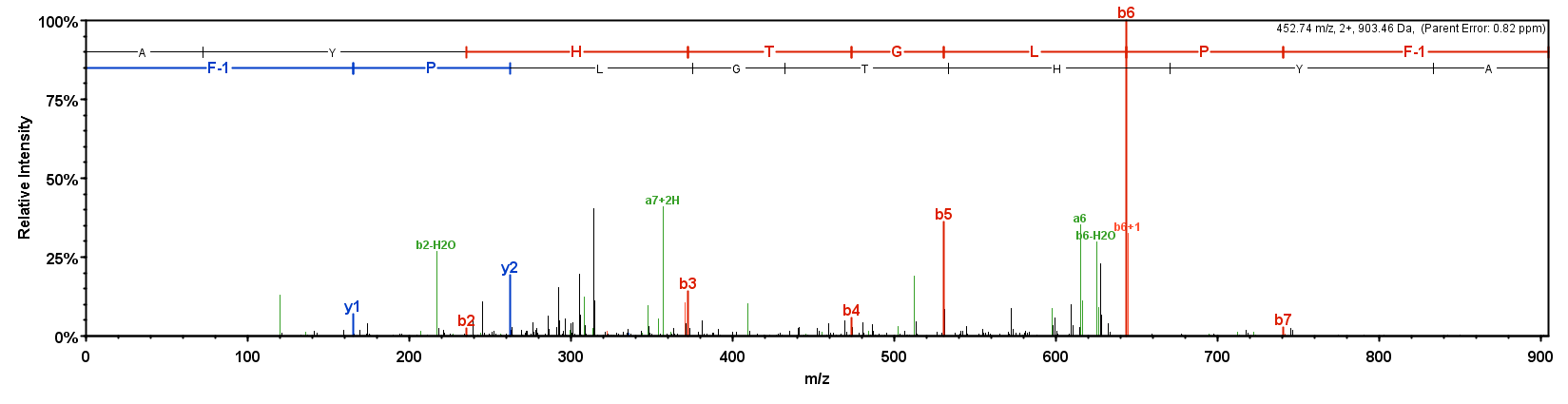


Eii

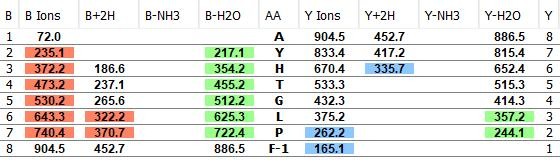


Supplementary Figure 4E (i) Mass spectrum derived from MS/MS analysis of the peptide ArS1.2 (AYHSALPF-NH2) present in a methanol acetic acid extract of radial nerve cords from *Asterias rubens*. (ii) MS/MS data is shown with the b series of fragment ions in red, fragment ions from the y series in blue, and other identified fragment ions in green.

Fi

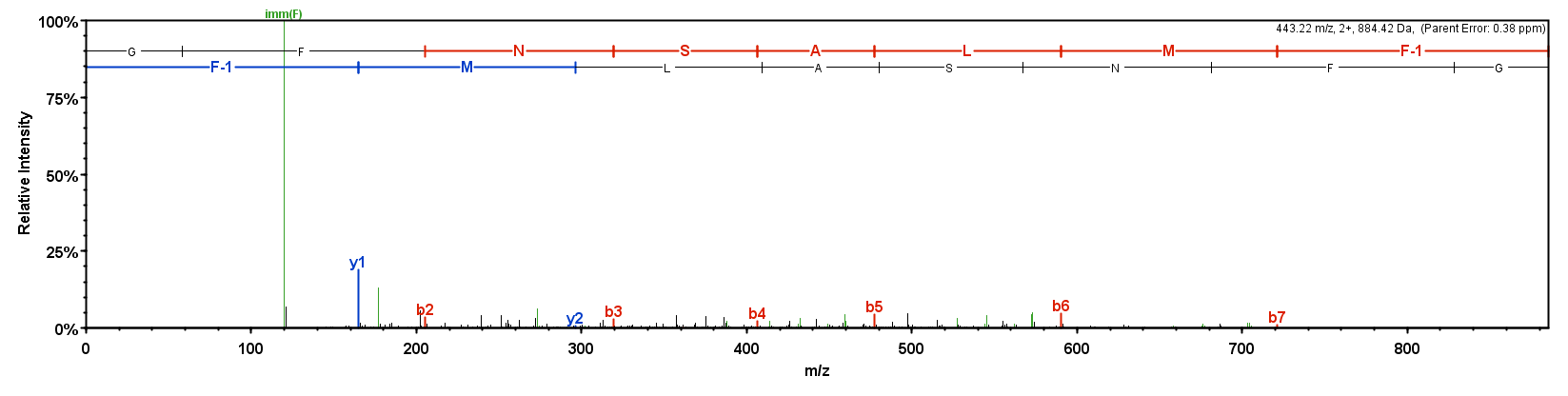


Fii

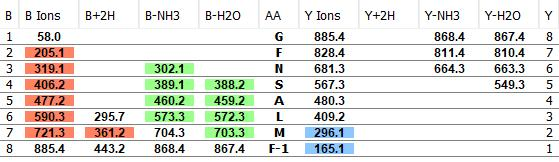


Supplementary Figure 4F (i) Mass spectrum derived from MS/MS analysis of the peptide ArS1.3 (AYHTGLPF-NH2) present in a methanol acetic acid extract of radial nerve cords from *Asterias rubens*. (ii) MS/MS data is shown with the b series of fragment ions in red, fragment ions from the y series in blue, and other identified fragment ions in green.

Gi

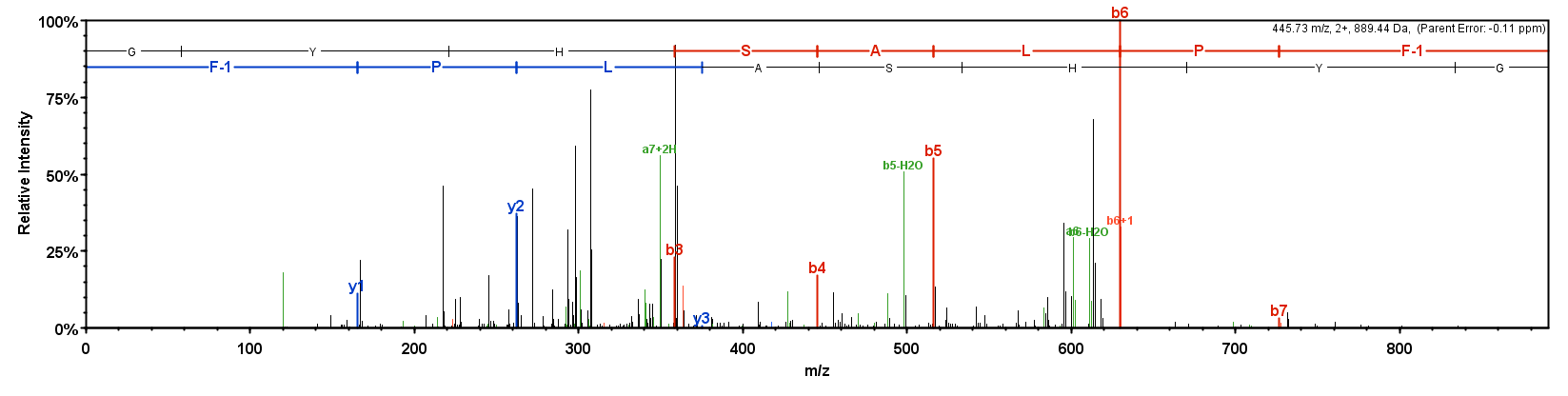


Gii

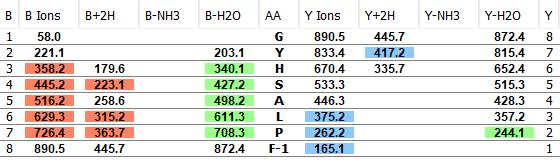


Supplementary Figure 4G (i) Mass spectrum derived from MS/MS analysis of the peptide ArS1.4 (GFNSALMF-NH2) present in a methanol acetic acid extract of radial nerve cords from *Asterias rubens*. (ii) MS/MS data is shown with the b series of fragment ions in red, fragment ions from the y series in blue, and other identified fragment ions in green.

Hi

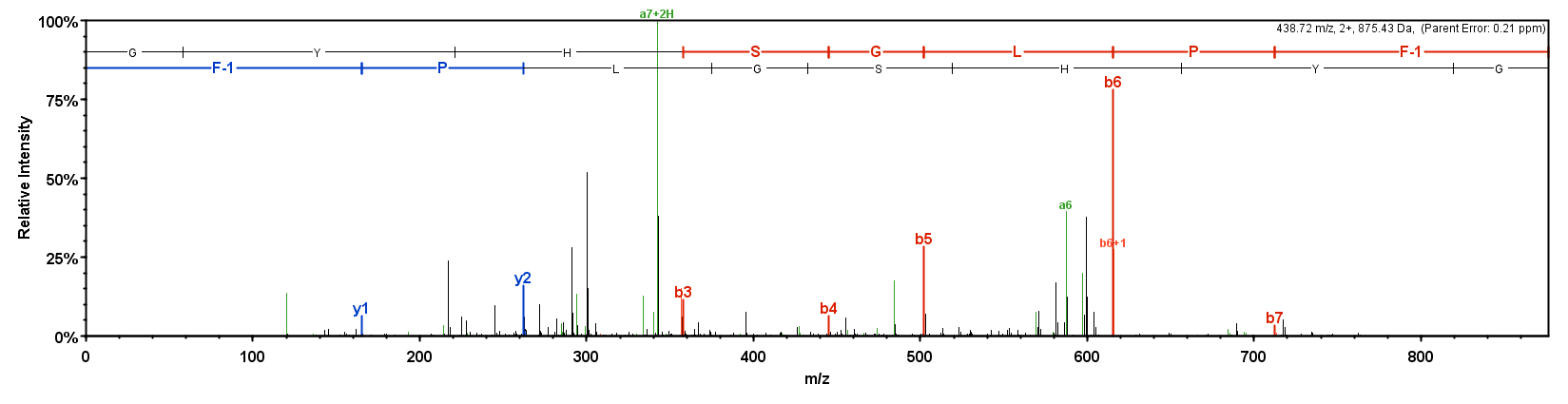


Hii

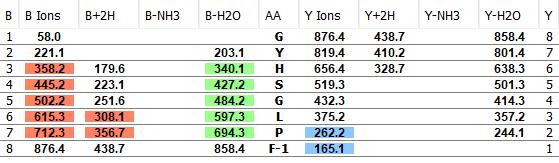


Supplementary Figure 4H (i) Mass spectrum derived from MS/MS analysis of the peptide ArS1.6 (GYHSALPF-NH2) present in a methanol acetic acid extract of radial nerve cords from *Asterias rubens*. (ii) MS/MS data is shown with the b series of fragment ions in red, fragment ions from the y series in blue, and other identified fragment ions in green.

Ii

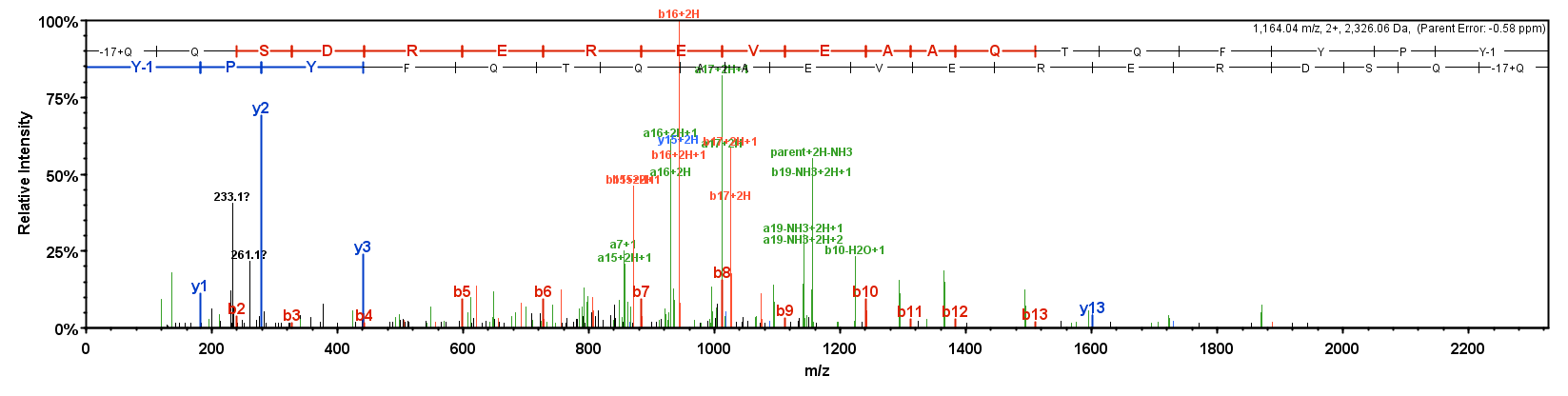


Iii

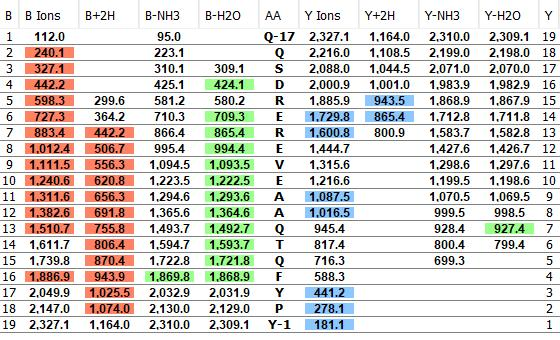


Supplementary Figure 4I (i) Mass spectrum derived from MS/MS analysis of the peptide ArS1.7 (GYHSGLPF-NH2) present in a methanol acetic acid extract of radial nerve cords from *Asterias rubens*. (ii) MS/MS data is shown with the b series of fragment ions in red, fragment ions from the y series in blue, and other identified fragment ions in green.

Ji

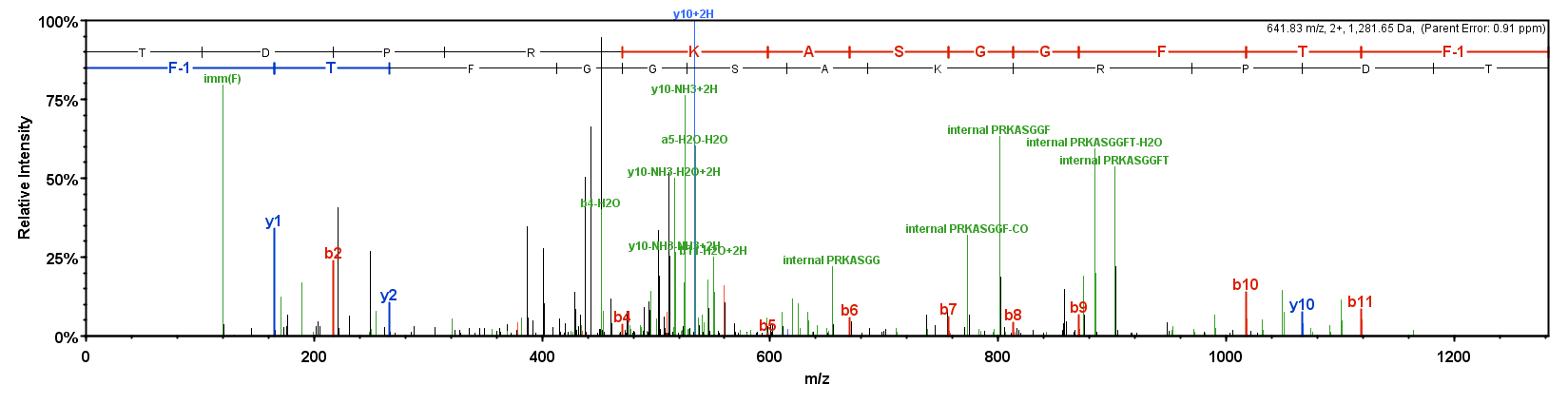


Jii

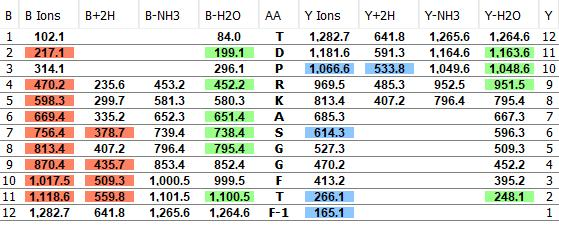


Supplementary Figure 4J (i) Mass spectrum derived from MS/MS analysis of the peptide ArS2.1 (pQQSDREREVEAAQTQFYPY-NH2) present in a methanol acetic acid extract of radial nerve cords from *Asterias rubens*. (ii) MS/MS data is shown with the b series of fragment ions in red, fragment ions from the y series in blue, and other identified fragment ions in green.

Ki

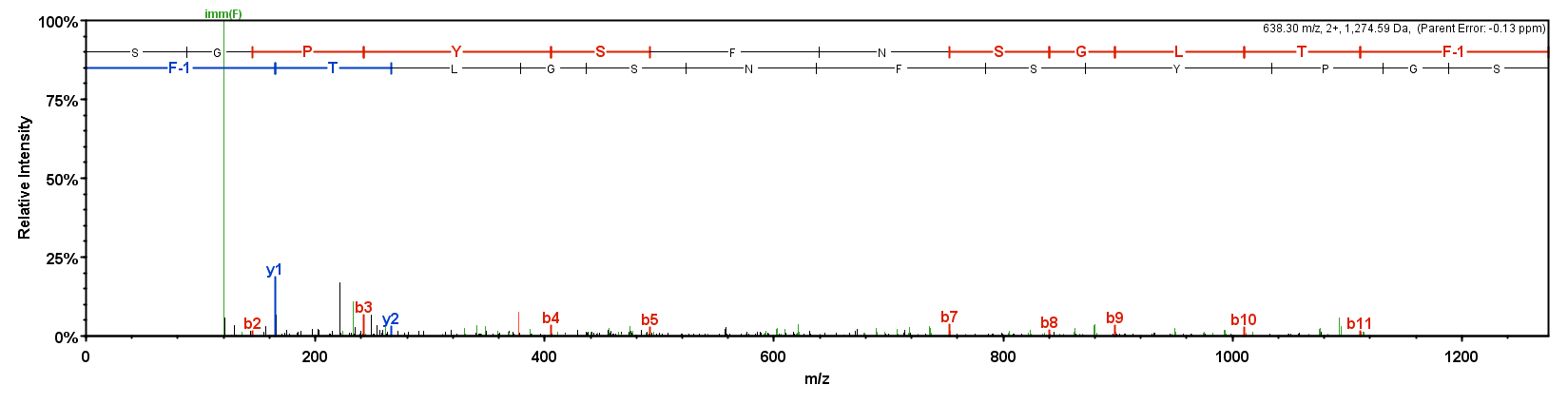


Kii

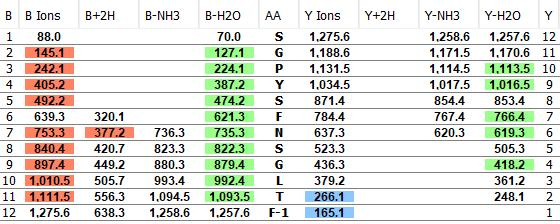


Supplementary Figure 4K (i) Mass spectrum derived from MS/MS analysis of the peptide ArS2.2 (TDPRKASGGFTF-NH2) present in a methanol acetic acid extract of radial nerve cords from *Asterias rubens*. (ii) MS/MS data is shown with the b series of fragment ions in red, fragment ions from the y series in blue, and other identified fragment ions in green.

Li

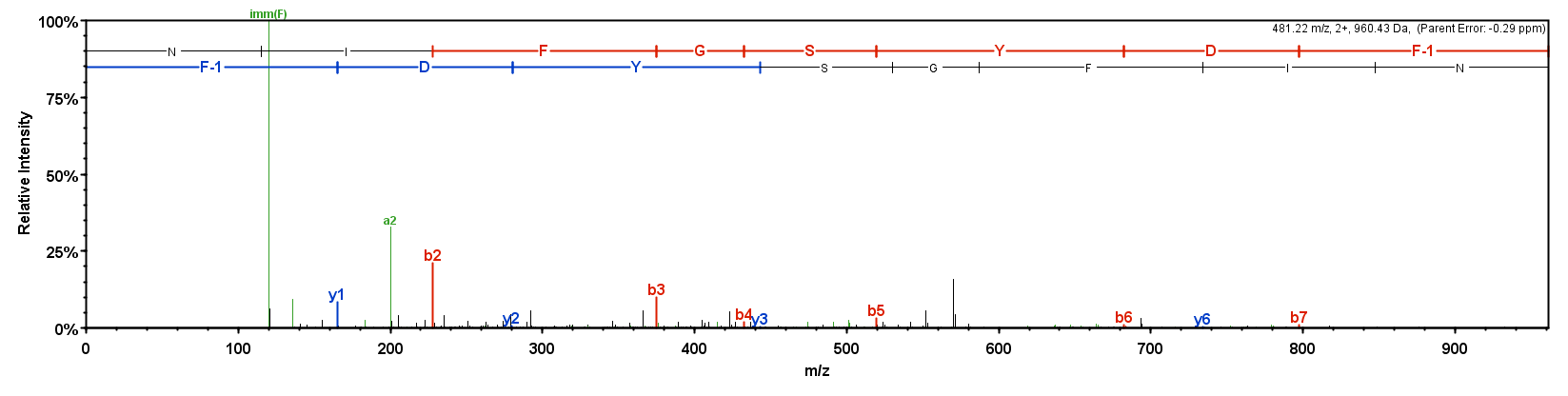


Lii

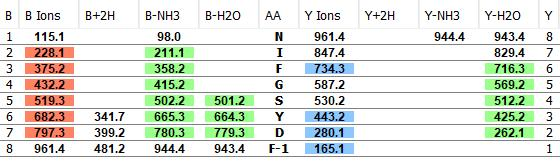


Supplementary Figure 4L (i) Mass spectrum derived from MS/MS analysis of the peptide ArS2.3 (SGPYSFNSGLTF-NH2) present in a methanol acetic acid extract of radial nerve cords from *Asterias rubens*. (ii) MS/MS data is shown with the b series of fragment ions in red, fragment ions from the y series in blue, and other identified fragment ions in green.

Mi

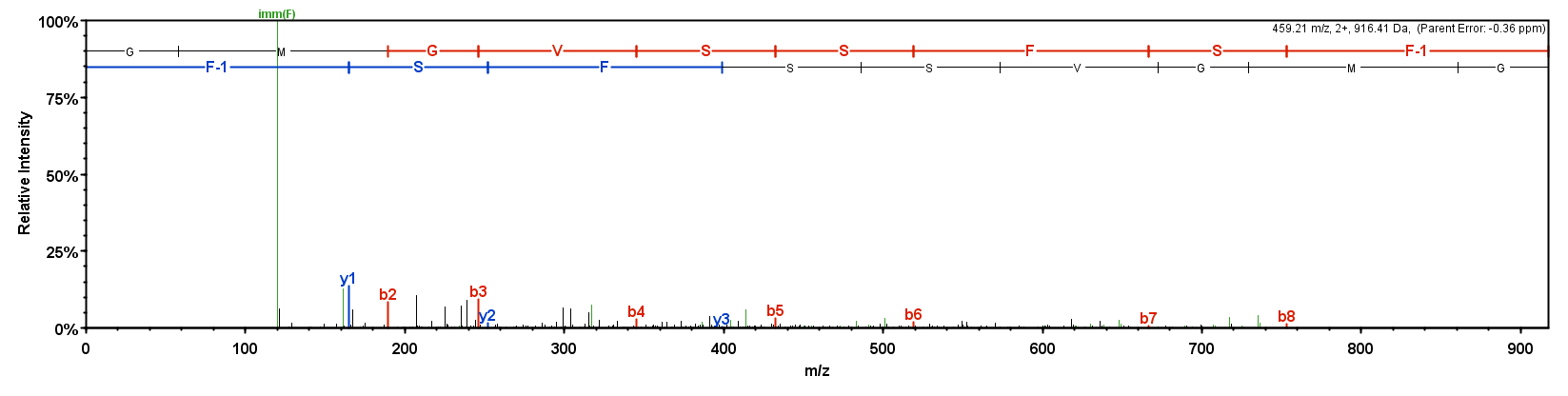


Mii

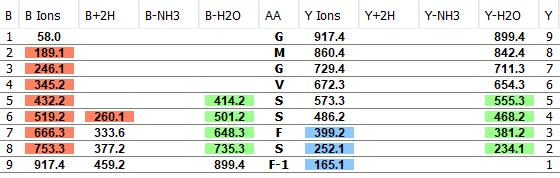


Supplementary Figure 4M (i) Mass spectrum derived from MS/MS analysis of the peptide ArS2.4 (NIFGSYDF-NH2) present in a methanol acetic acid extract of radial nerve cords from *Asterias rubens*. (ii) MS/MS data is shown with the b series of fragment ions in red, fragment ions from the y series in blue, and other identified fragment ions in green.

Ni

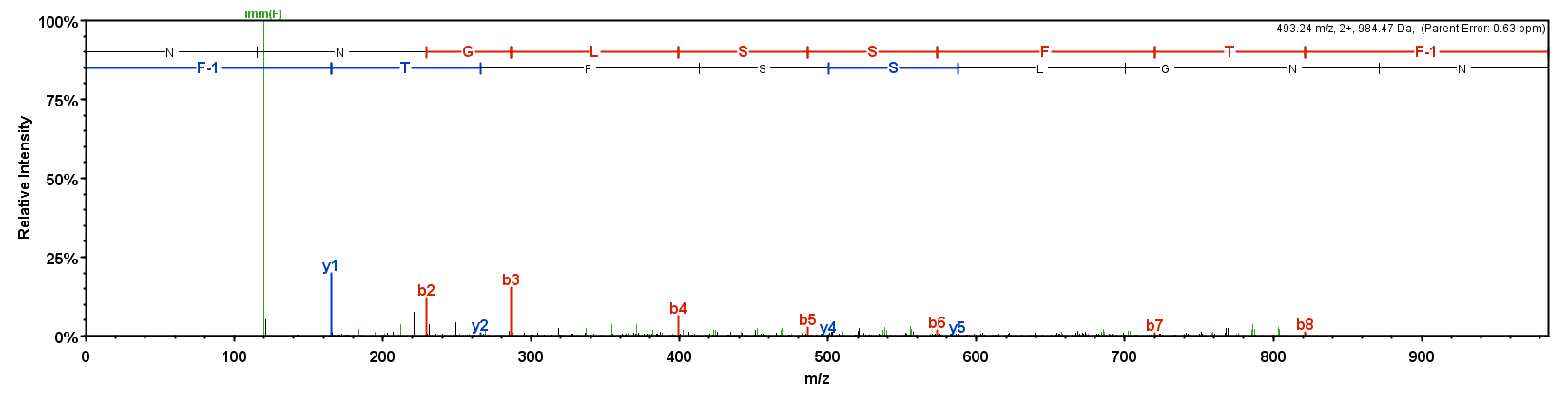


Nii

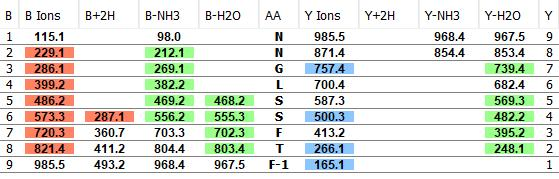


Supplementary Figure 4N (i) Mass spectrum derived from MS/MS analysis of the peptide ArS2.6 (GMGVSSFSF-NH2) present in a methanol acetic acid extract of radial nerve cords from *Asterias rubens*. (ii) MS/MS data is shown with the b series of fragment ions in red, fragment ions from the y series in blue, and other identified fragment ions in green.

Oi



Oii



Supplementary Figure 4O (i) Mass spectrum derived from MS/MS analysis of the peptide ArS2.8 (NNGLSSFTF-NH2) present in a methanol acetic acid extract of radial nerve cords from *Asterias rubens*. (ii) MS/MS data is shown with the b series of fragment ions in red, fragment ions from the y series in blue, and other identified fragment ions in green.