Supporting Information For:

Two-dimensional Identification and Localization of Isomers in Crystallin Peptides Using TWIM-MS

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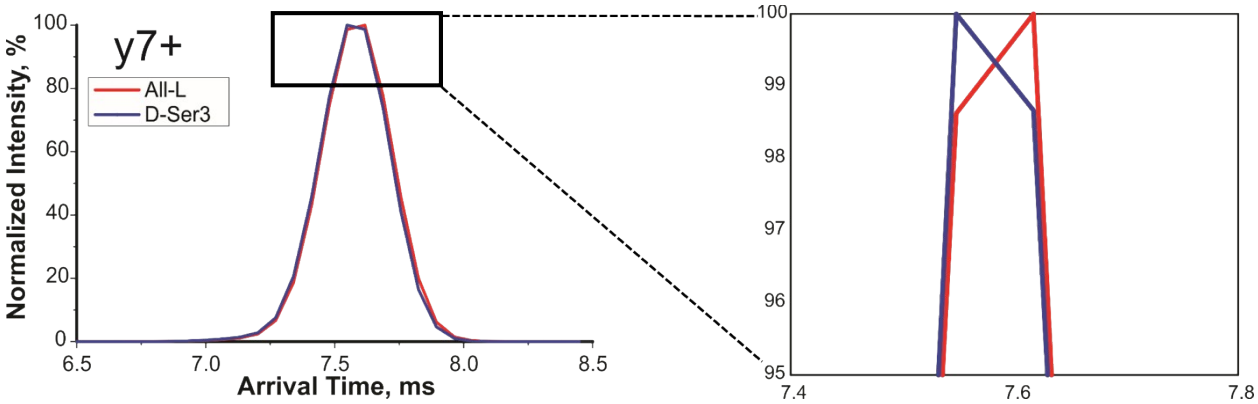

Figure S1. ATDs of y_7^+ ions for $AP_{D/L}SWFDTGLSEMR$ and the magnified peak maxima.

Full CID spectra:

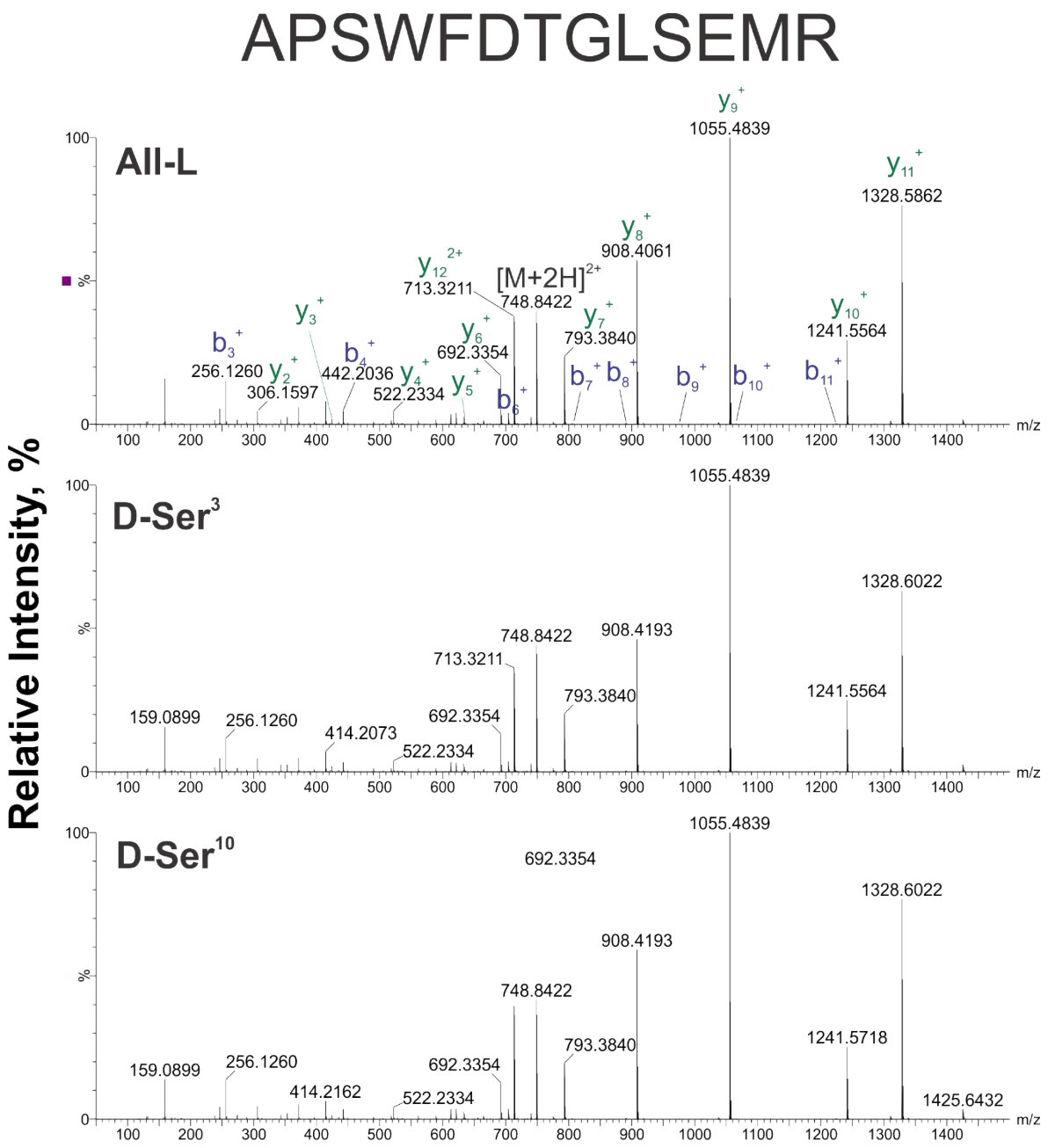

Figure S2: The CID spectra for the peptide isomers of APSWFDTGLSEMR: All-L (Top), D-Ser3 (Middle), and D-Ser10 (Bottom).

Full CID Spectra

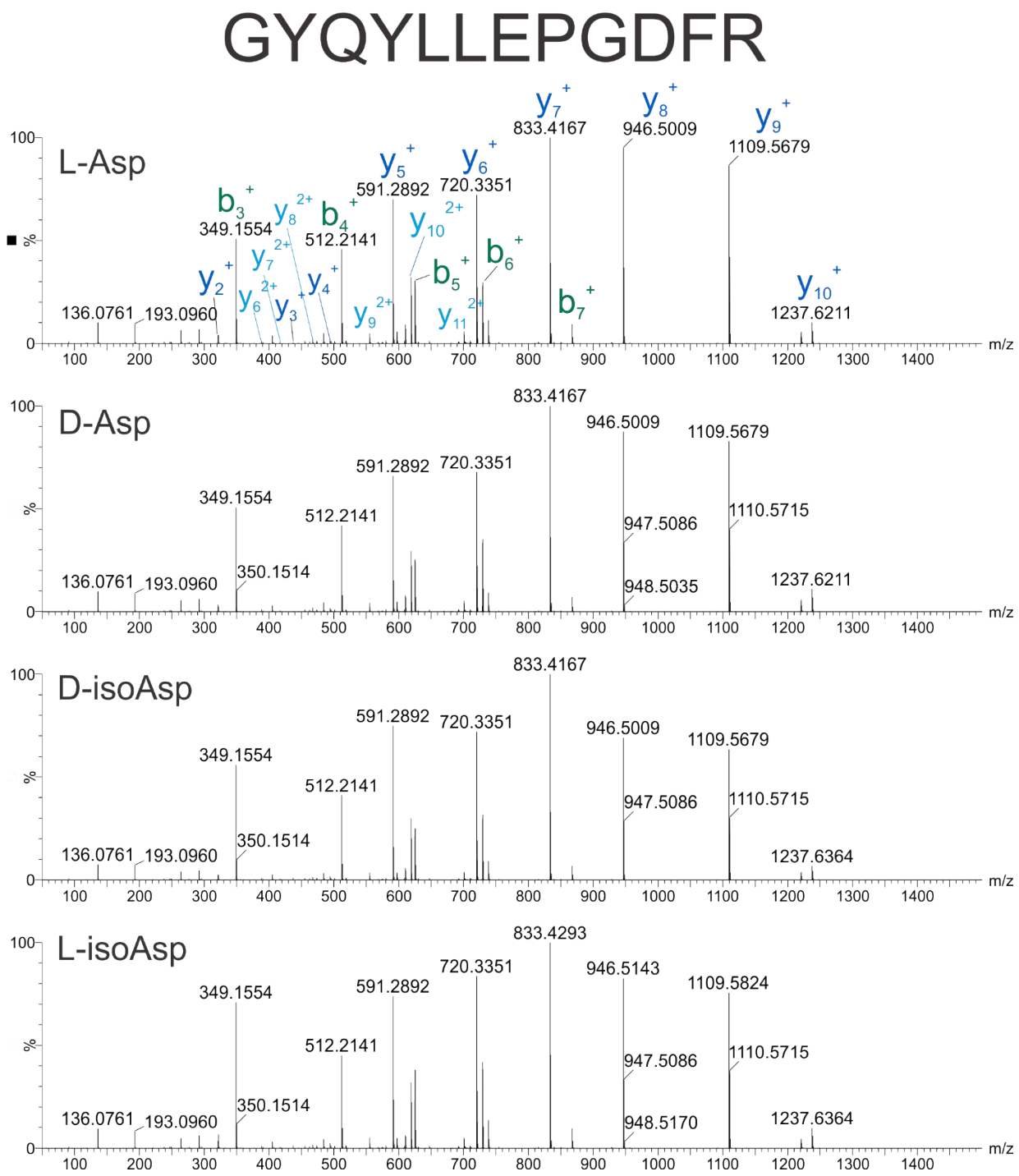

Figure S3: The CID spectra for the peptide isomers of GYQYLLEPGDFR: L-Asp (Top), D-Asp (Second), D-isoAsp (Third), and L-isoAsp (Bottom).

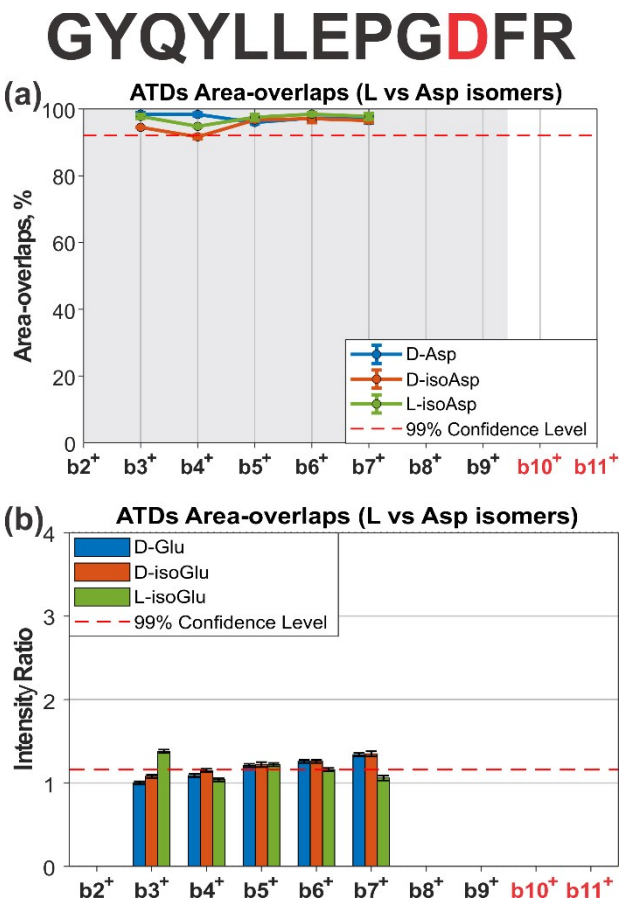

Figure S4: Result summary for peptide isomers GYQYLLEPGDFR. **(a)** ATD area-overlaps between L-Asp and D-Asp (blue), D-isoAsp (orange), or L-isoAsp (green) for b-ions. **(b)** CID intensity ratios of the isomeric b-ions.

Full CID Spectra:

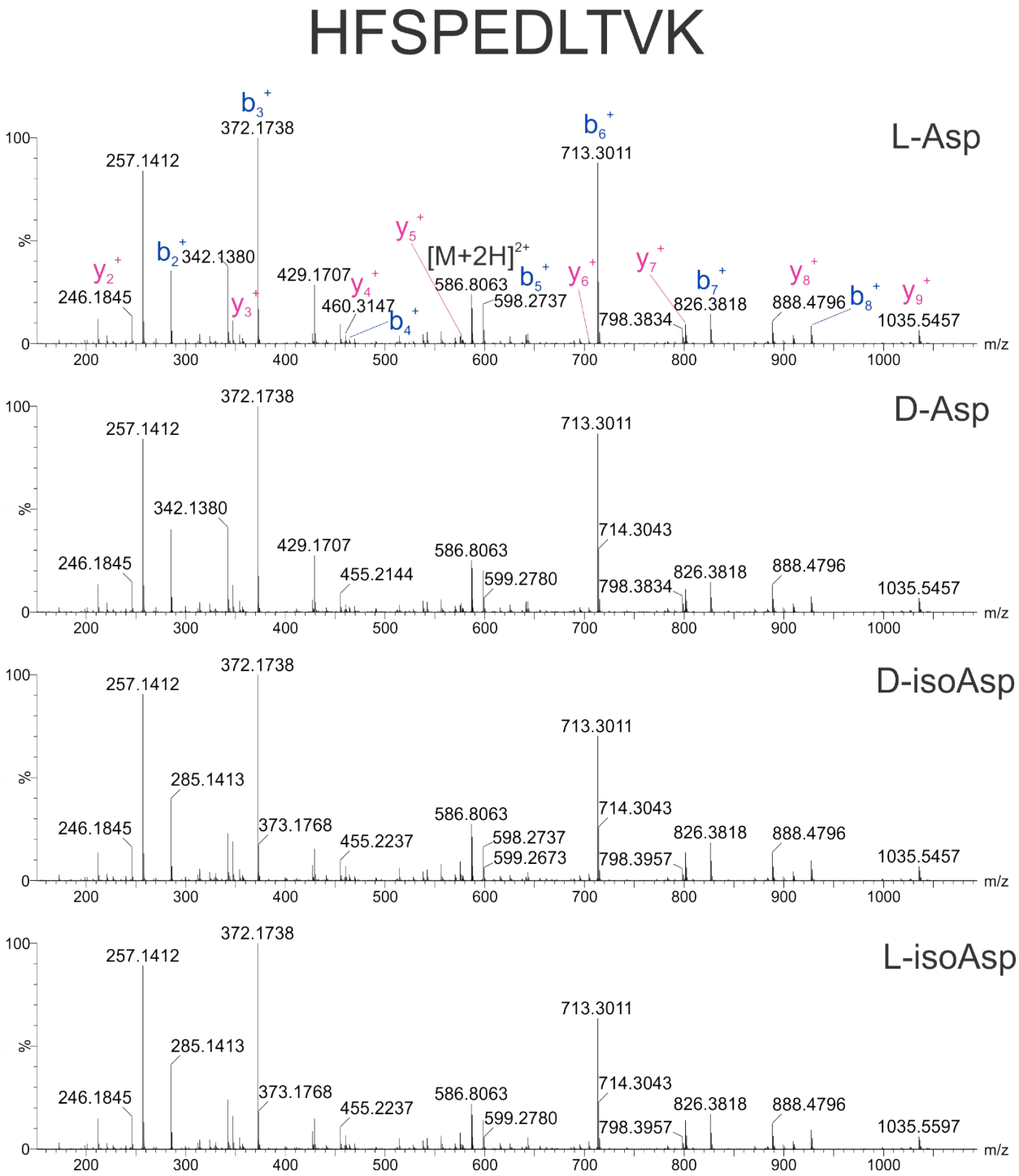

Figure S5: The CID spectra for the peptide isomers of HFSPDELTVK: L-Asp (Top), D-Asp (Second), D-isoAsp (Third), and L-isoAsp (Bottom).

Full CID Spectra:

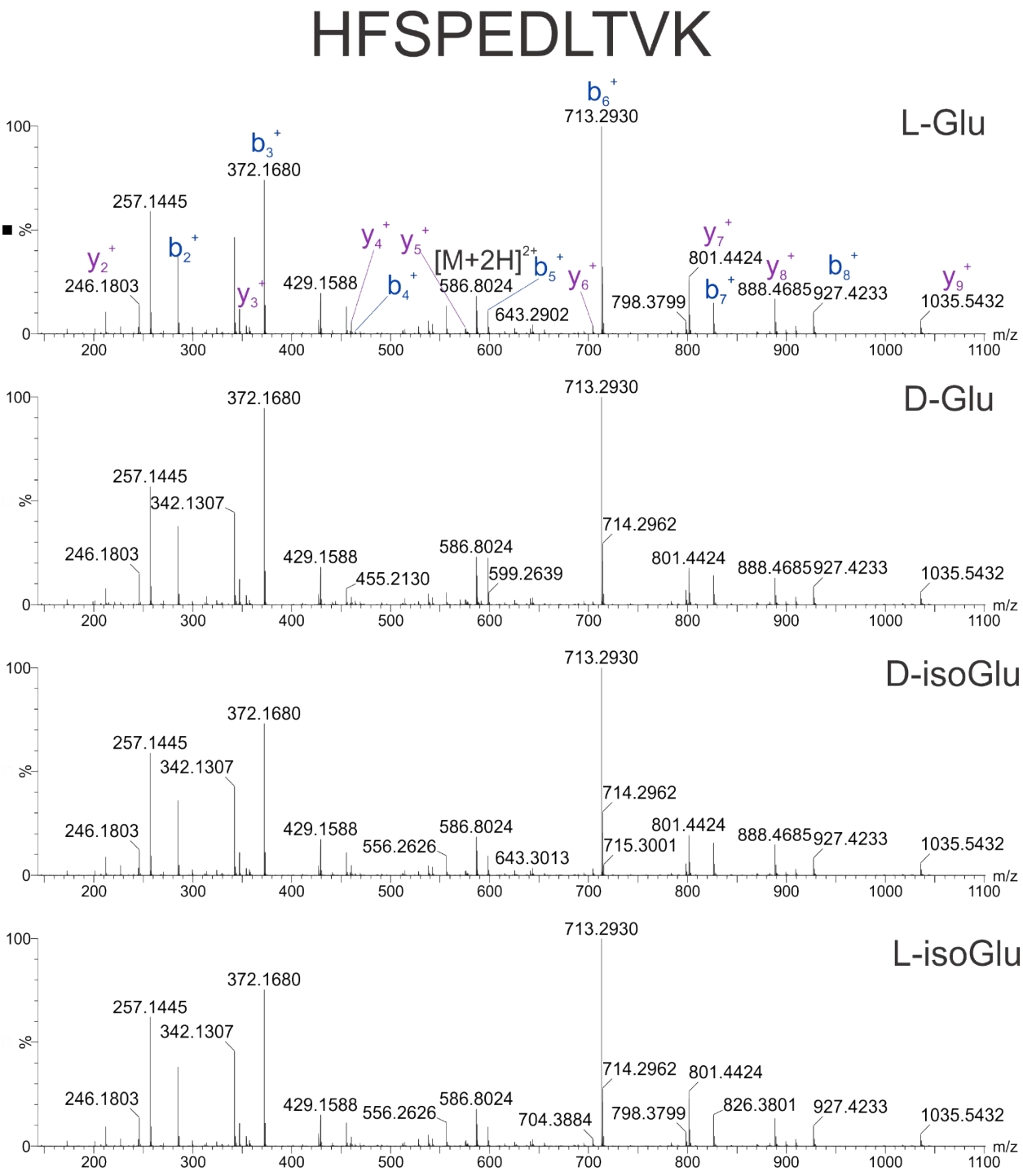

Figure S6: The CID spectra for the peptide isomers of HFSPDELTVK: L-Glu (Top), D-Glu (Second), D-isoGlu (Third), and L-isoGlu (Bottom).