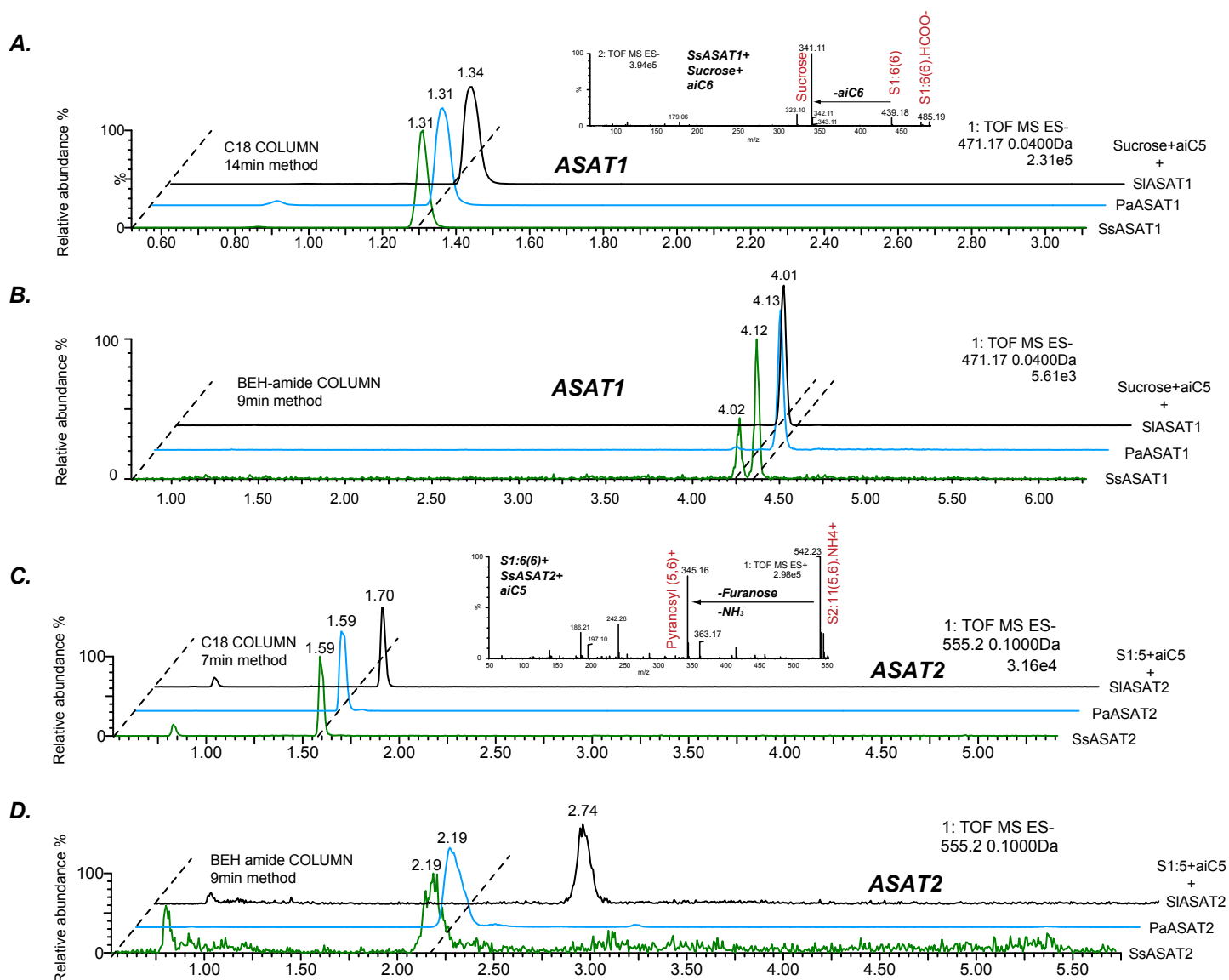


**Figure 2-Figure Supplement 5**



**Figure 2-Figure Supplement 5: Comparative analyses of LC/MS retention times of enzyme reaction products.** (A,B) Comparison between S1:5(5) produced by SsASAT1, PaASAT1 and SIASAT1 on the C18 (A) and the BEH amide (B) column. The dashed line connect the peaks aligned based on their retention times, and shows that the SsASAT1 product peaks align precisely with the PaASAT1 product peaks with two different chromatographic methods (A,B), suggesting structural identity. (C,D) Comparisons between SsASAT2, PaASAT2 and SIASAT2 enzymes similar to those shown above, suggest that SsASAT2 and PaASAT2 acylate the same positions on the sucrose molecule. Inset in (A) shows negative ion mode fragmentation of S1:6(6) product of the SsASAT1 reaction using aiC6 CoA as donor. Inset in (C) shows positive ion mode fragmentation of S2:11(5,6) product of SsASAT2 using S1:6(6) produced by SsASAT1 as substrate. Inset in (C) shows that both aiC5 and aiC6 are added on the same (pyranose) ring.