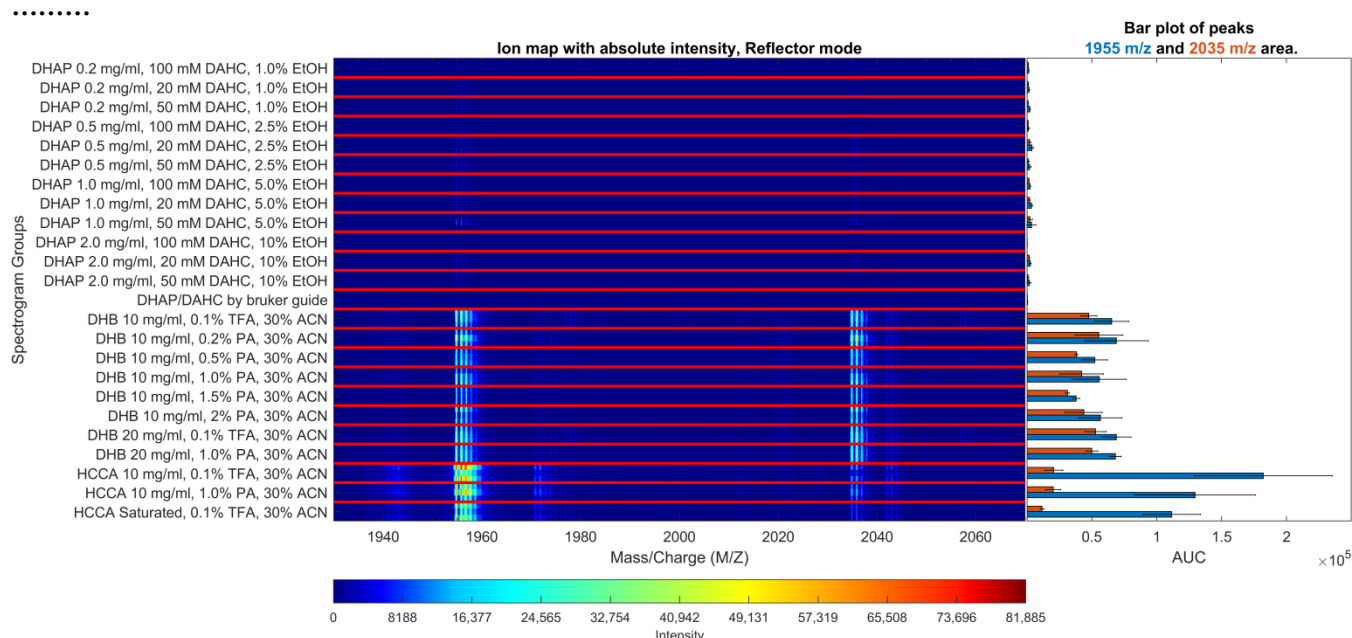


Supporting Information

Article

Quantitative Assessment of Serine-8 Phosphorylated β -amyloid using MALDI-TOF Mass Spectrometry

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Figure S1. Ion map for pSer8- A β 16 mass spectra obtained using different matrices with the addition of various concentrations of phosphoric and trifluoroacetic acid in reflectron mode. A β 16 corresponds to m/z 1955, pSer8- A β 16 corresponds to m/z 2035.

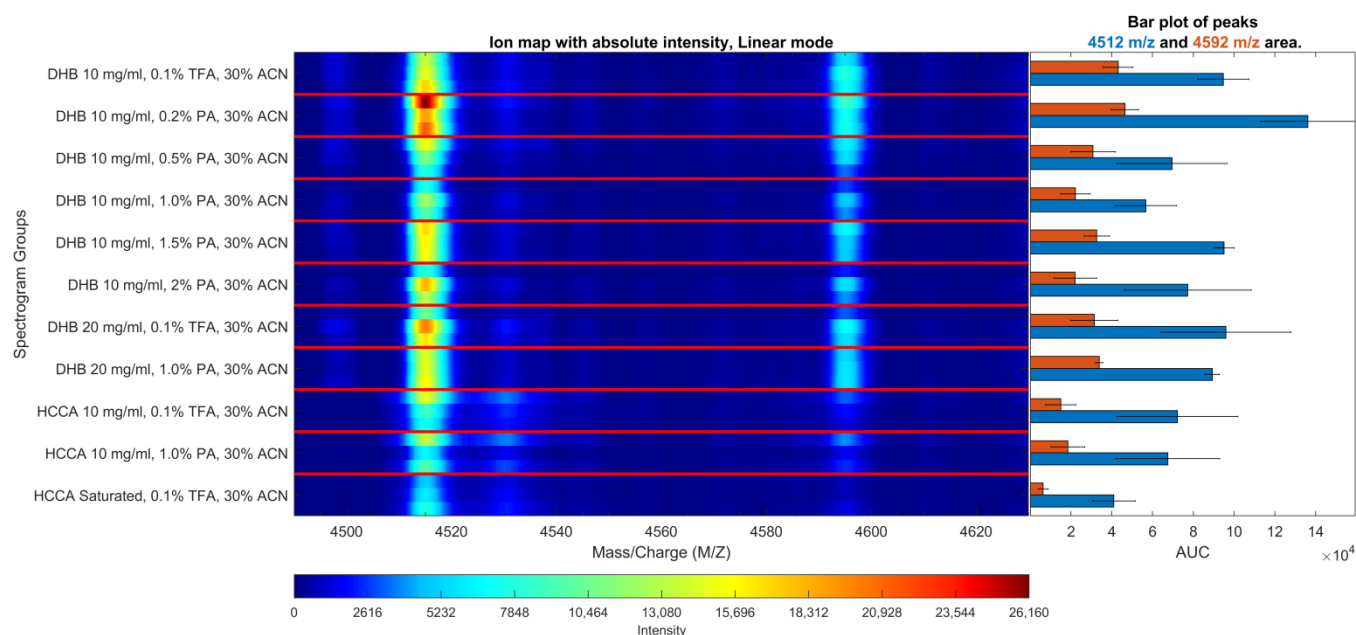


Figure S2. Ion map for pSer8- A β 42 mass spectra obtained using DHB and HCCA matrices with the addition of various concentrations of phosphoric and trifluoroacetic acid in linear mode. A β 42 corresponds to m/z 4512, pSer8- A β 42 corresponds to m/z 4592.

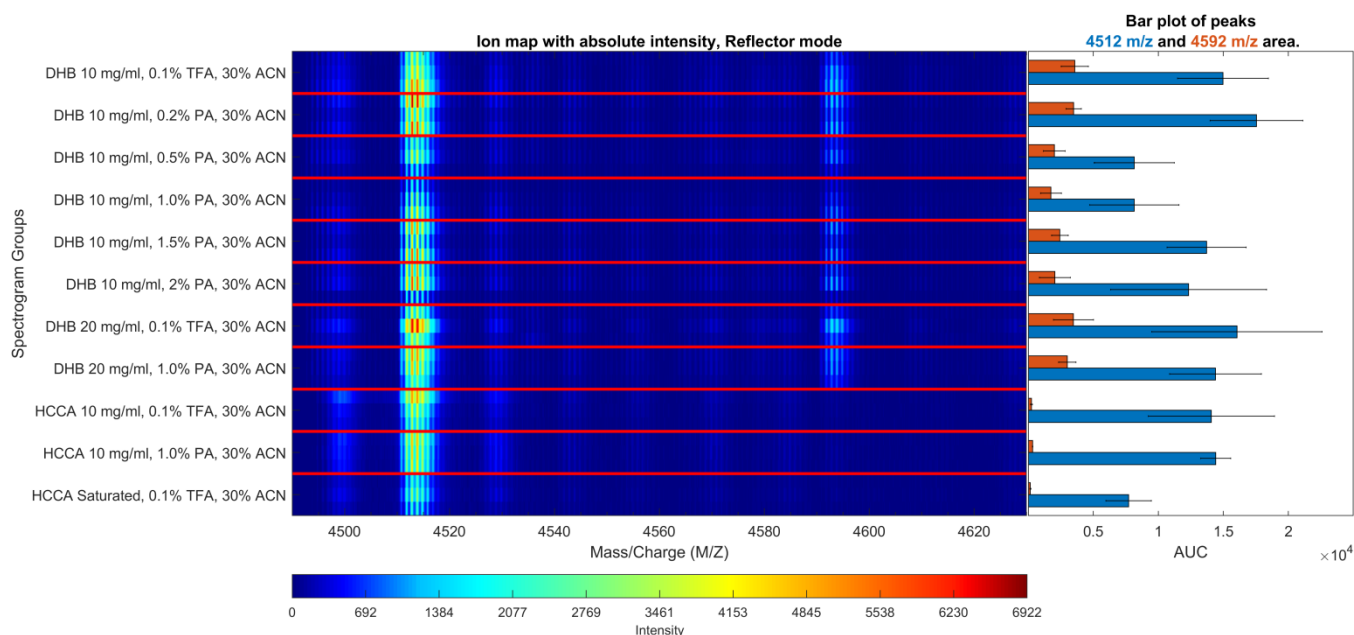


Figure S3. Ion map for pSer8- A β 42 mass spectra obtained using DHB and HCCA matrices with the addition of various concentrations of phosphoric and trifluoroacetic acid in reflectron. A β 42 corresponds to m/z 4512, pSer8- A β 42 corresponds to m/z 4592.

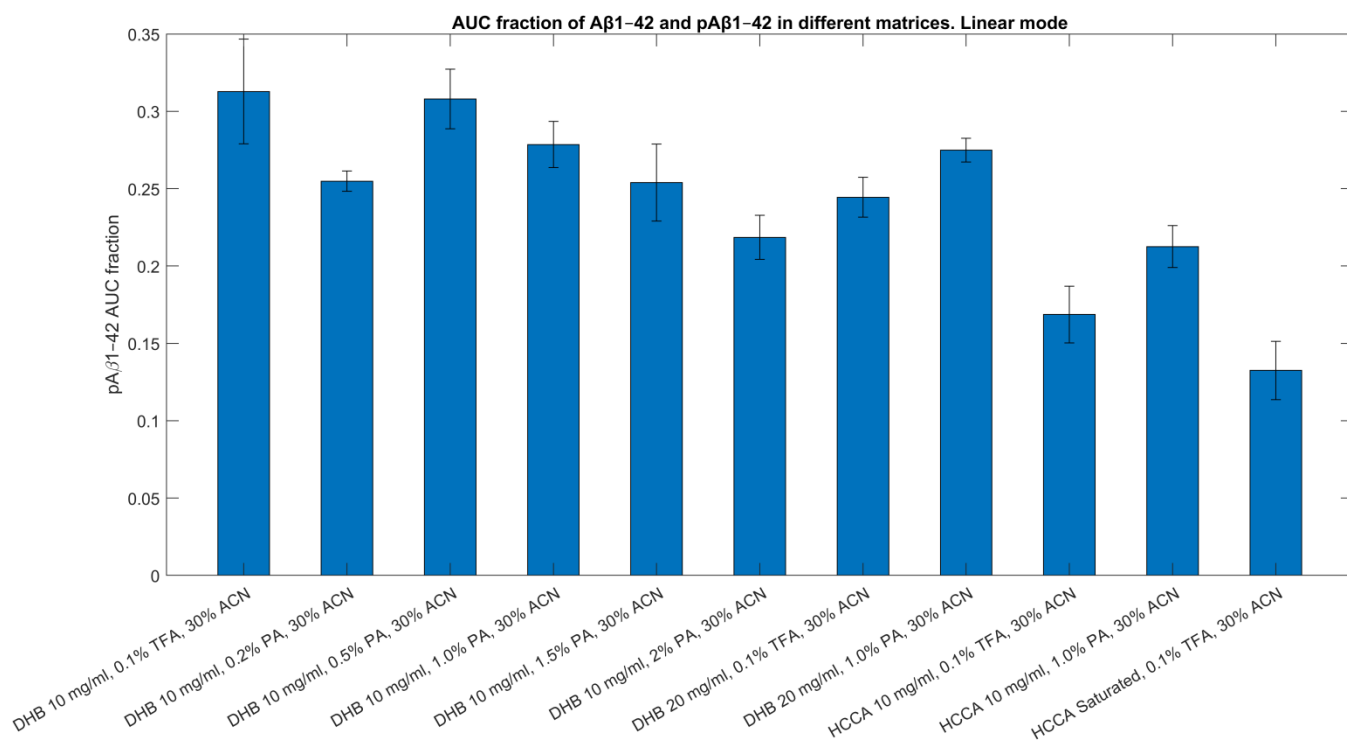


Figure S6. Comparison of the areas under the curves corresponding to pSer8-A β 42 and A β peaks using different matrix solutions using linear mode.

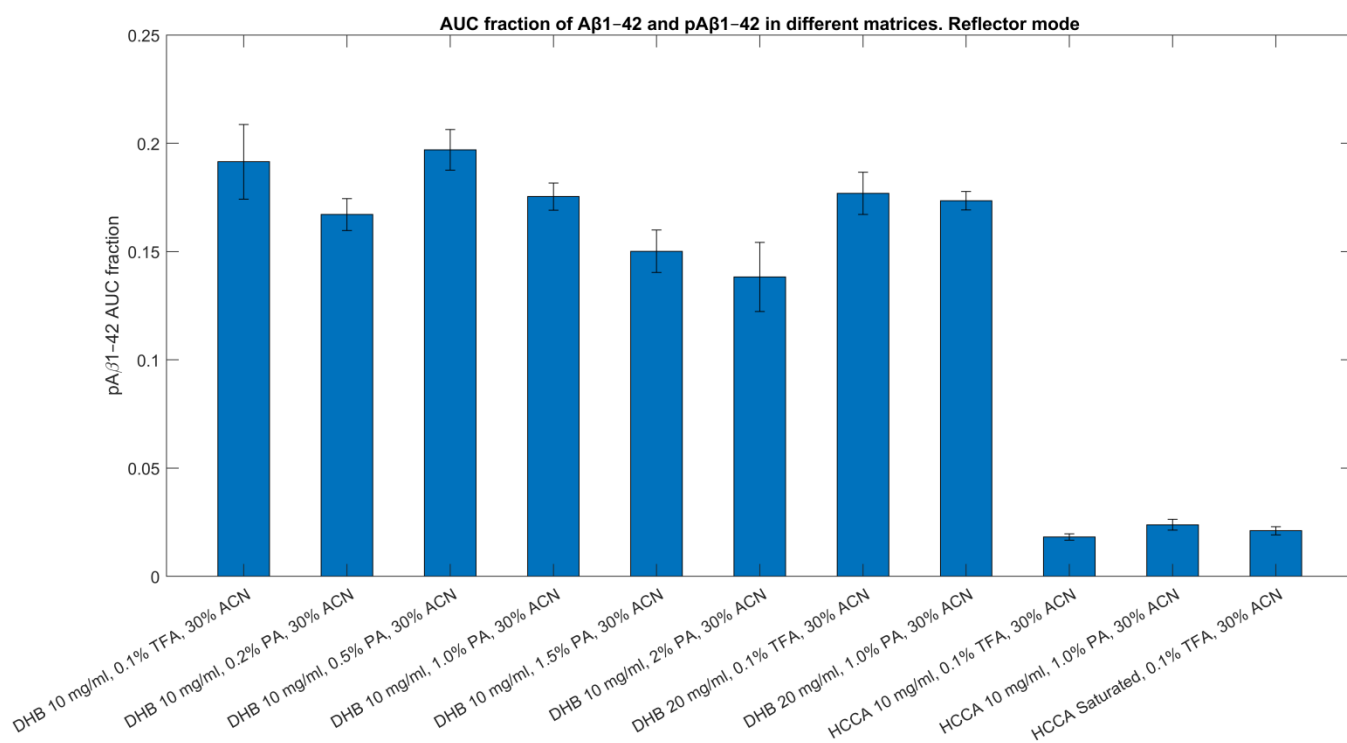


Figure S7. Comparison of the areas under the curves corresponding to pSer8-A β 42 and A β peaks using different matrix solutions using reflectron mode.

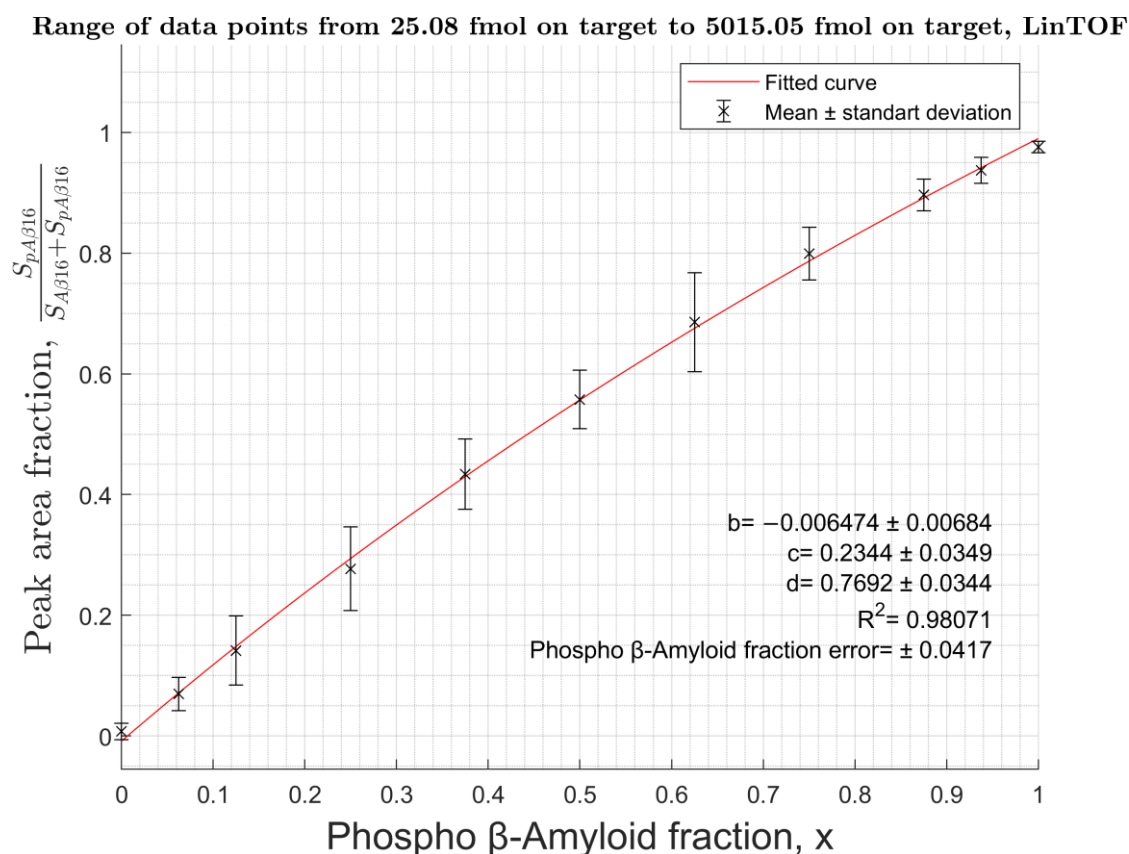


Figure S8. Calibration curve for A β 16 in linear mode on a Polished Steel target, 10 mg/ml DHB, 0.5% PA.

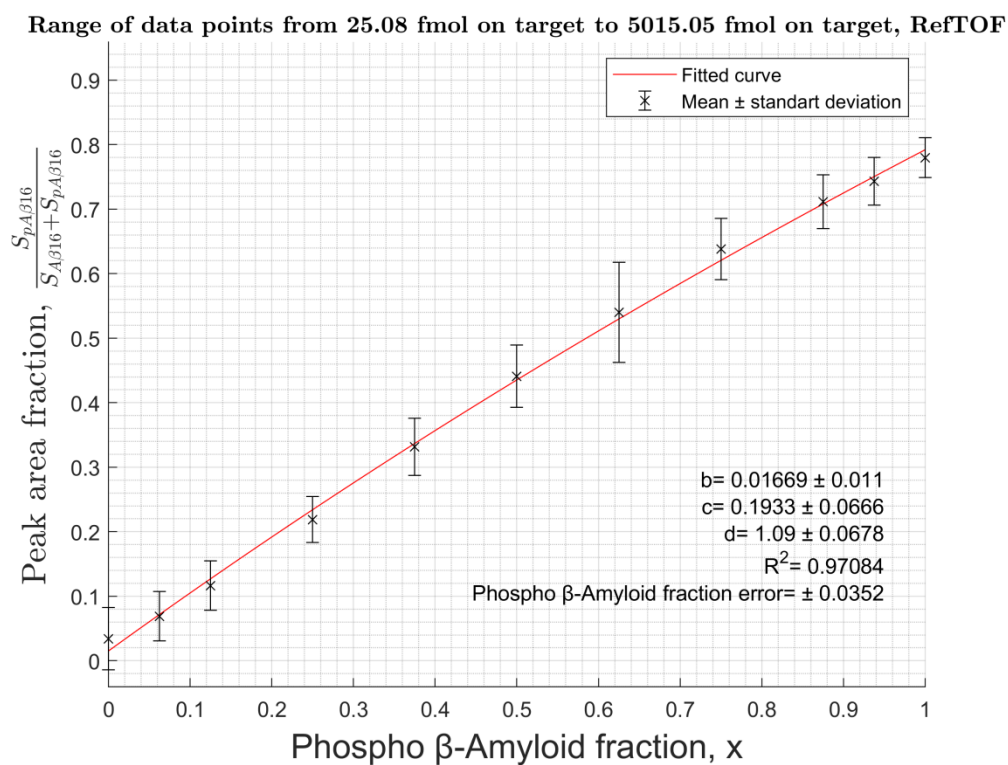


Figure S9. Calibration curve for A β 16 in reflectron mode on a Polished Steel target, 10 mg/ml DHB, 0.5% PA.

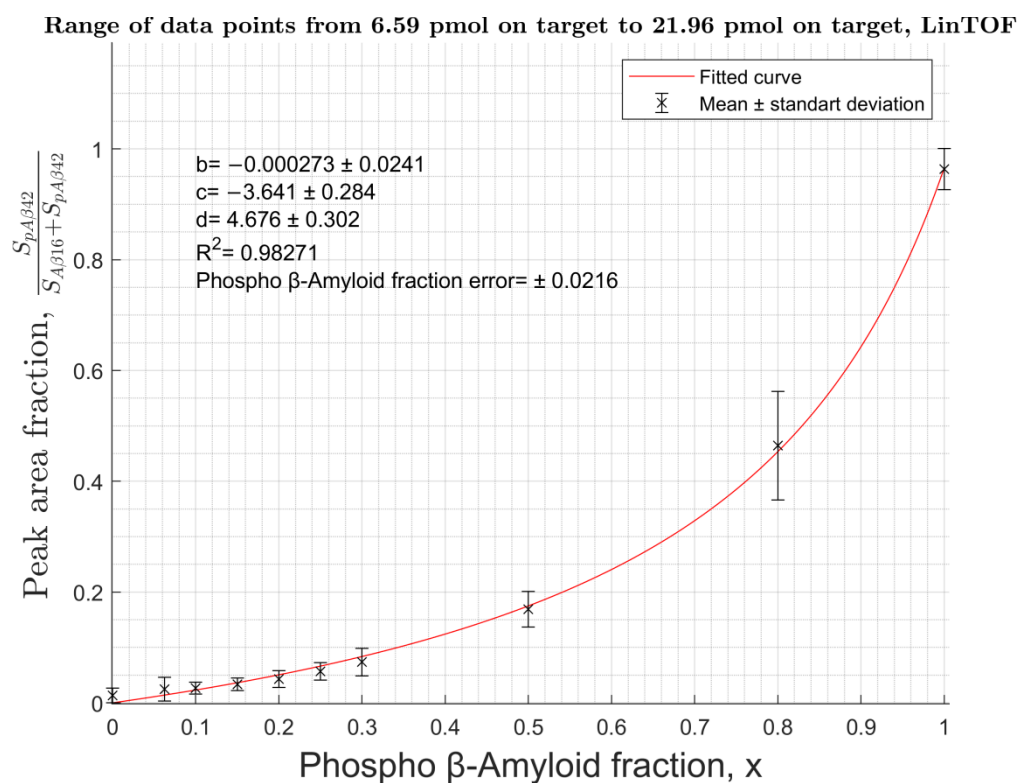


Figure S10. Calibration curve for A β 42 in linear mode on an AnchorChip target, 10 mg/ml DHB, 0.1% TFA.

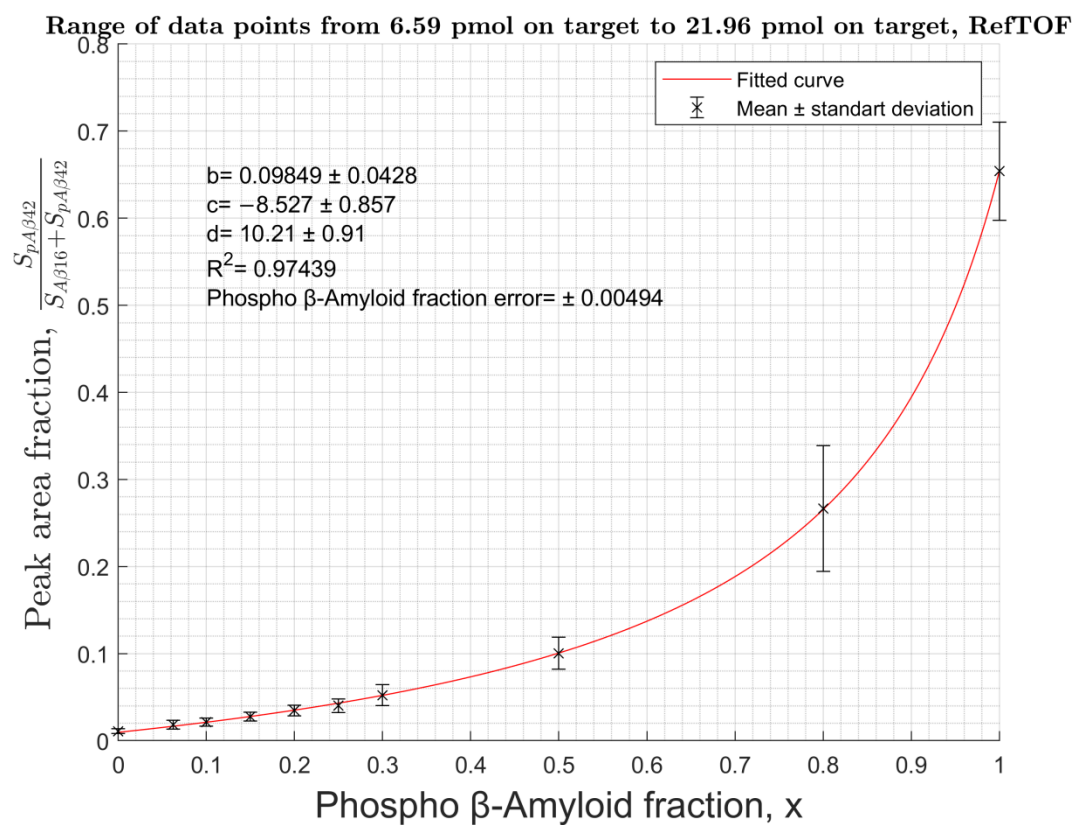


Figure S11. Calibration curve for A β 42 in reflectron mode on an AnchorChip target, 10 mg/ml DHB, 0.1% TFA.

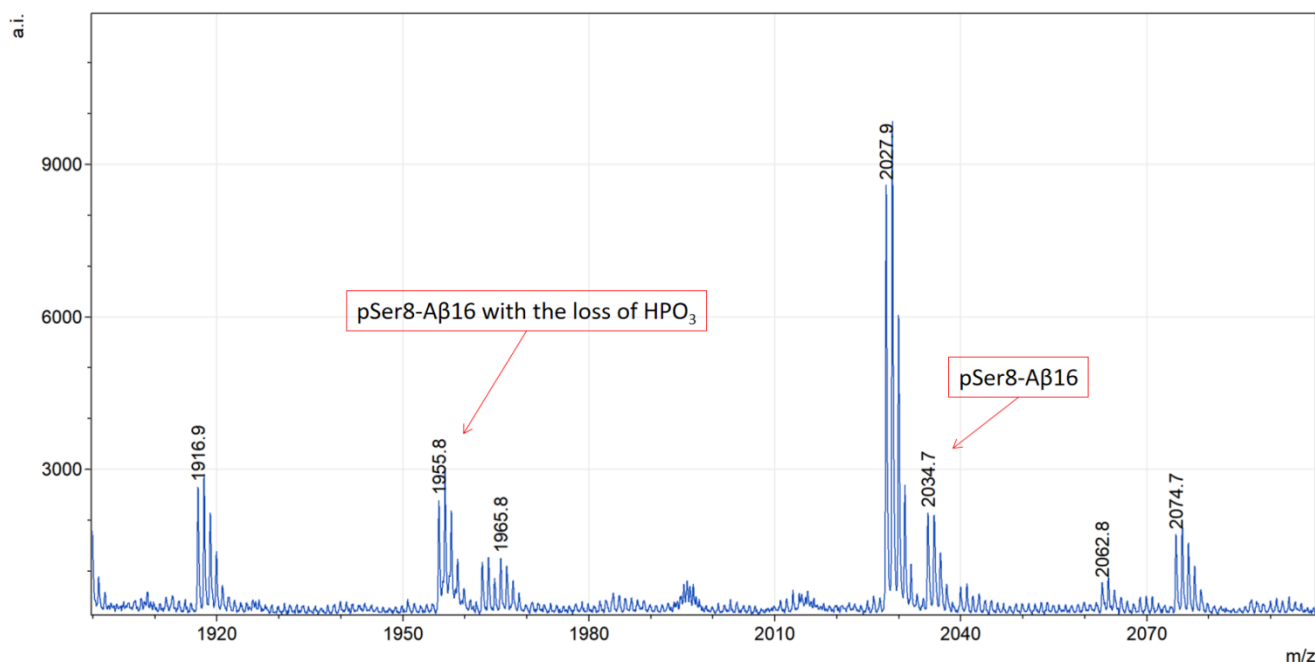


Figure S12. Mass spectrum of the hydrolyzate of the beta-amyloid fraction obtained from the model sample.

Human serum diluted 1:50 was spiked with pSer8-A β 42 to a final concentration of 100 ng/mL, after which hydrolysis was performed to obtain pSer8-A β 16 fragments.

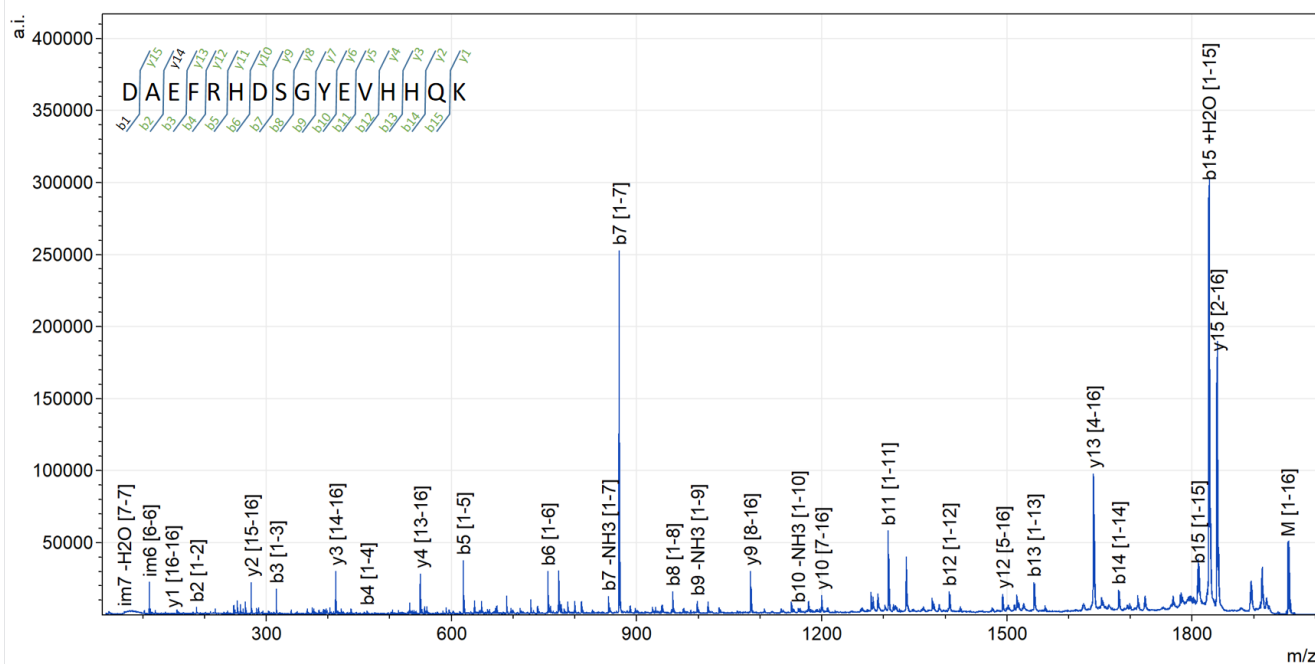


Figure S13. MS/MS of A β 16 from BioPeptide Co. Fragments in peptide sequence marked with color if their peak in spectra with the same m/z: green - found; black - not found.

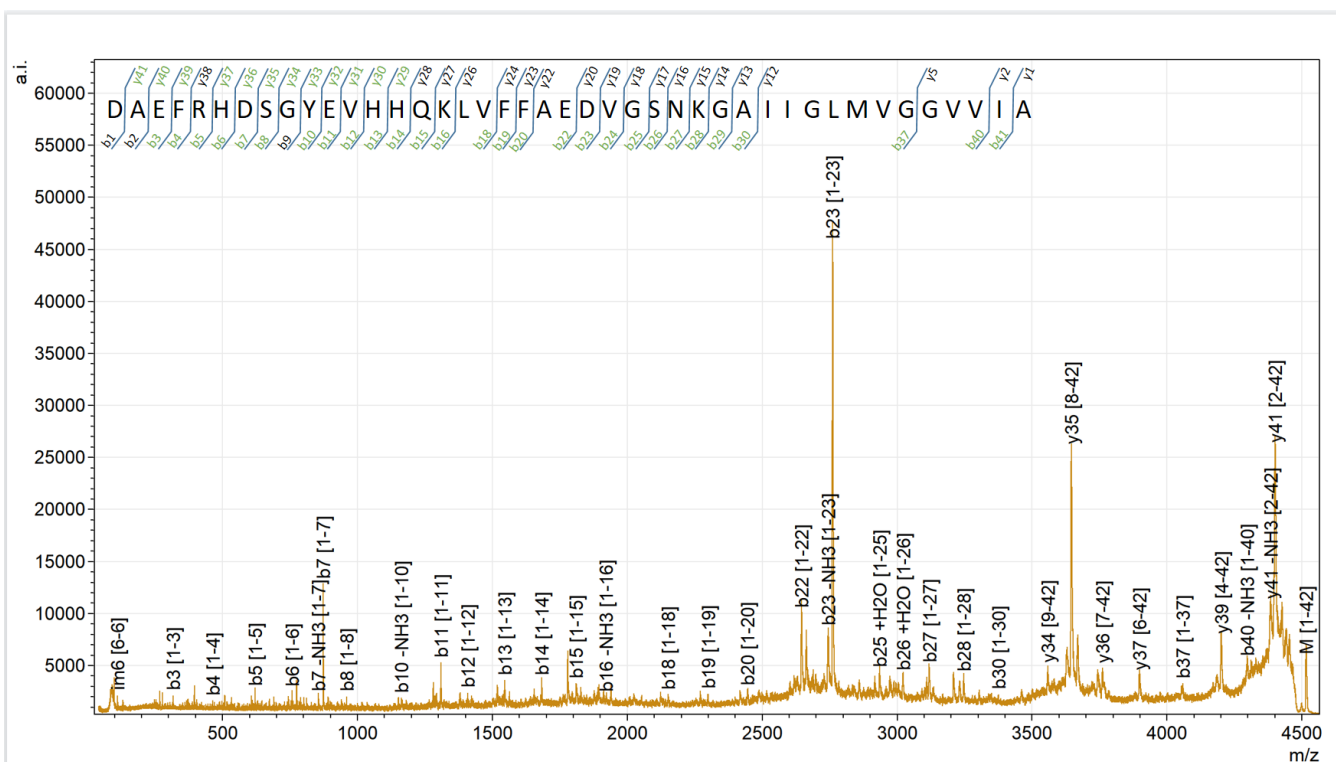


Figure S14. MS/MS of Aβ42 from BioPeptide Co. Fragments in peptide sequence marked with color if their peak in spectra with the same m/z: found - green; not found - black.

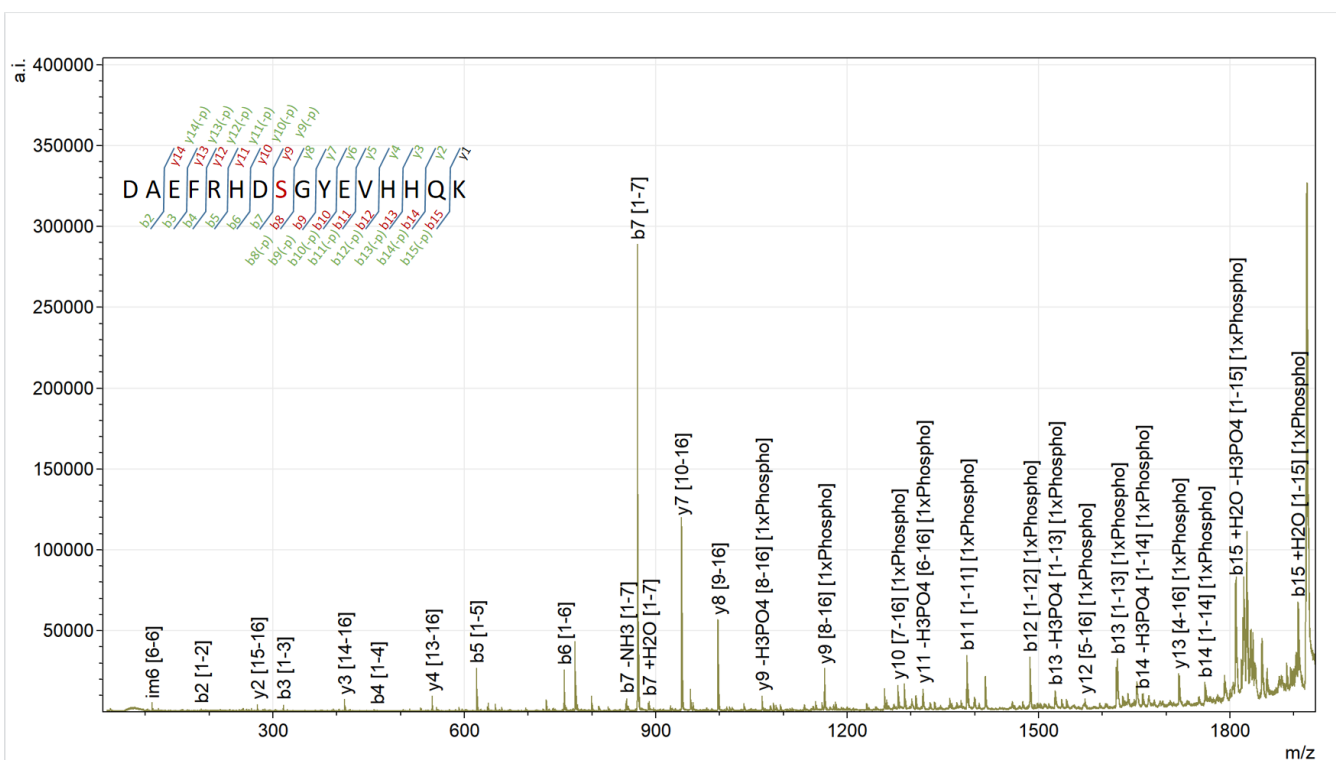


Figure S15. MS/MS of pAβ16 from BioPeptide Co. Fragments in peptide sequence marked with color if their peak in spectra with the same m/z: detected and have phospho group - red; found and it doesn't have phospho group or has lost it - green; not found - black.

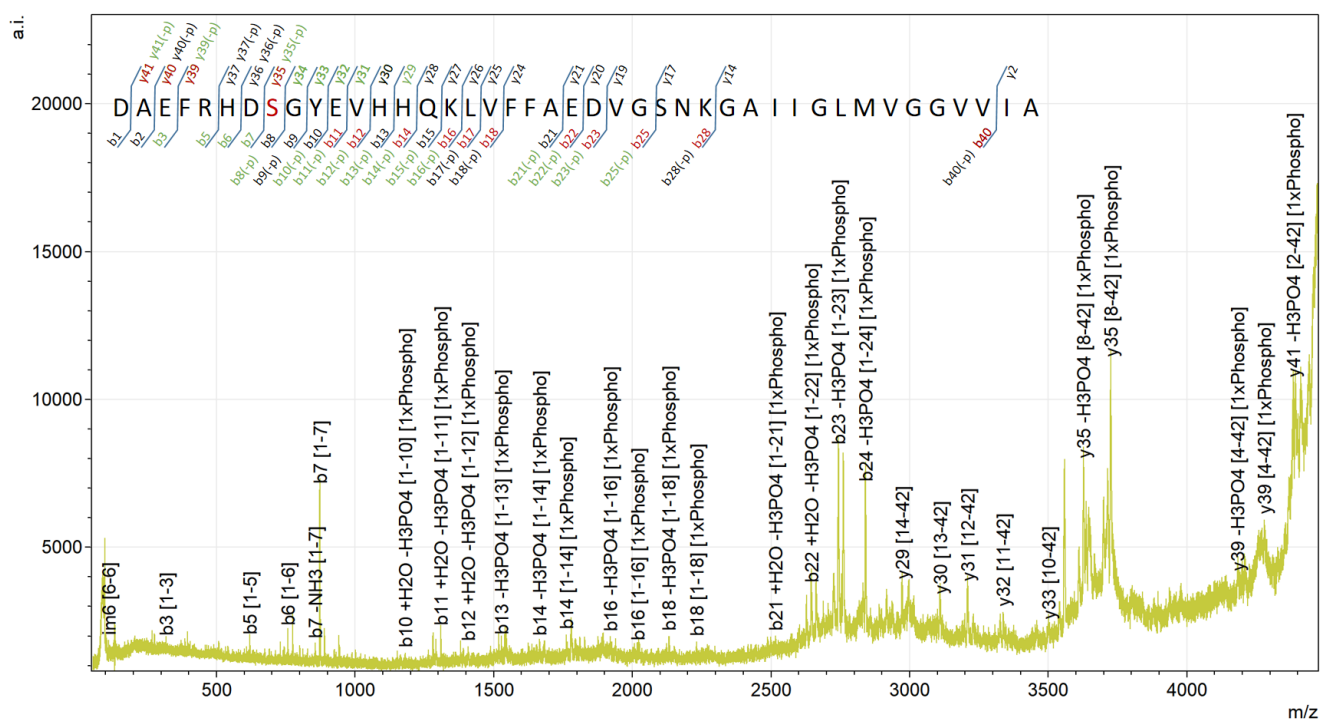


Figure S16. MS/MS of A β 42 from BioPeptide Co. Fragments in peptide sequence marked with color if their peak in spectra with the same m/z: detected and have phospho group - red; found and it doesn't have phospho group or has lost it - green; not found - black.