



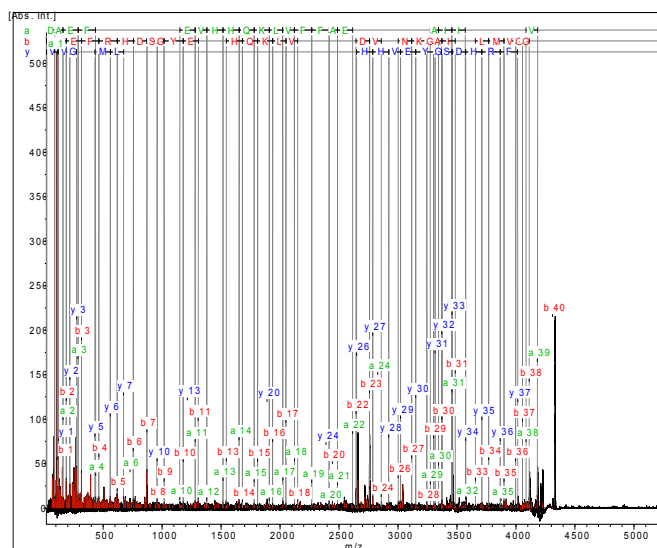
Title	Alternative Selection of beta-Site APP-Cleaving Enzyme 1 (BACE1) Cleavage Sites in Amyloid beta-Protein Precursor (APP) Harboring Protective and Pathogenic Mutations within the A beta Sequence
Author(s)	Kimura, Ayano; Hata, Saori; Suzuki, Toshiharu
Citation	Journal of Biological Chemistry (JBC), 291(46), 24041-24053 https://doi.org/10.1074/jbc.M116.744722
Issue Date	2016-11-11
Doc URL	https://hdl.handle.net/2115/67573
Rights	This research was originally published in The journal of biological chemistry. Ayano Kimura, Saori Hata and Toshiharu Suzuki. Alternative Selection of β -Site APP-Cleaving Enzyme 1 (BACE1) Cleavage Sites in Amyloid β -Protein Precursor (APP) Harboring Protective and Pathogenic Mutations within the A β Sequence. The journal of biological chemistry. 2016; Vol.291:24041-24053. ©the American Society for Biochemistry and Molecular Biology
Type	journal article
File Information	supplemental data.pdf, supplementary materials



human A β 1-40

Precursor ion : m/z 4328.076

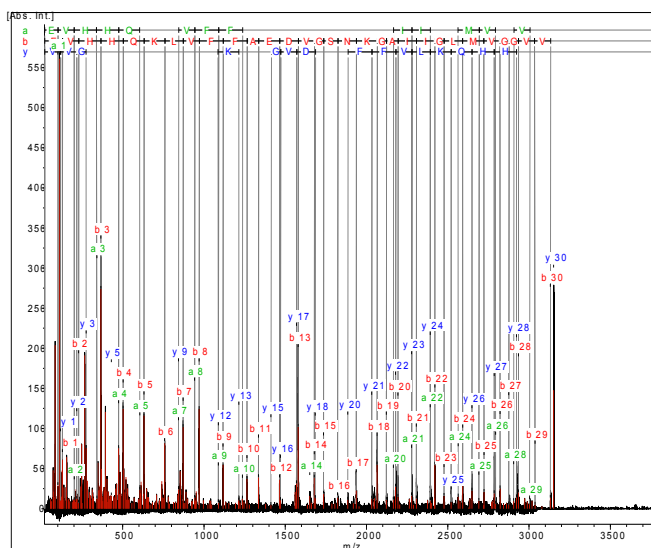
DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV



human A β 11-40

Precursor ion : m/z 3150.657

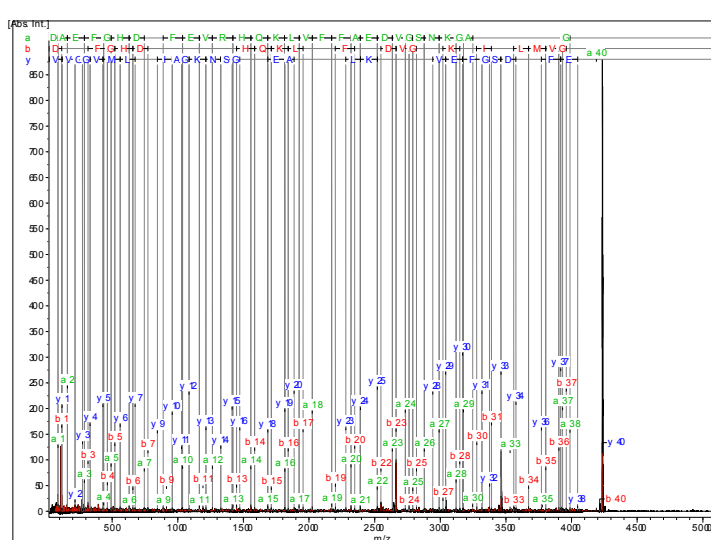
EVHHQKLVFFAEDVGSNKGAIIGLMVGGVV



mouse A β 1-40

Precursor ion : m/z 4232.696

DAEFGHDSGFVRHQKLVFFAEDVGSNKGAIIGLMVGGVV



mouse A β 11-40

Precursor ion : m/z 3169.723

EVRRHQKLVFFAEDVGSNKGAIIGLMVGGVV

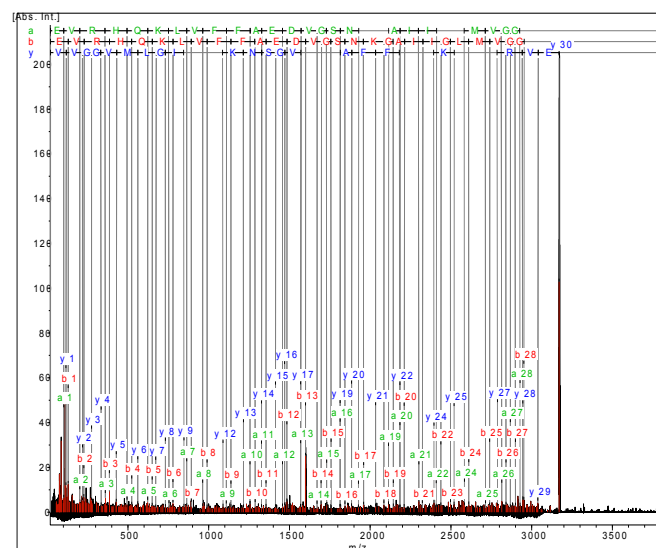


Figure S1. Confirmation of amino acid sequence of human and mouse A β ¹⁻⁴⁰ and A β ¹¹⁻⁴⁰ secreted from N2a cells expressed with human and mouse APP.

Signals of A β ¹⁻⁴⁰ and A β ¹¹⁻⁴⁰ derived from human APP expressed in N2a cells were subject to tandem MS (MS/MS) analysis as described in Hata *et al.* (*J. Biol. Chem.* [2009] 284, 36024-36033).

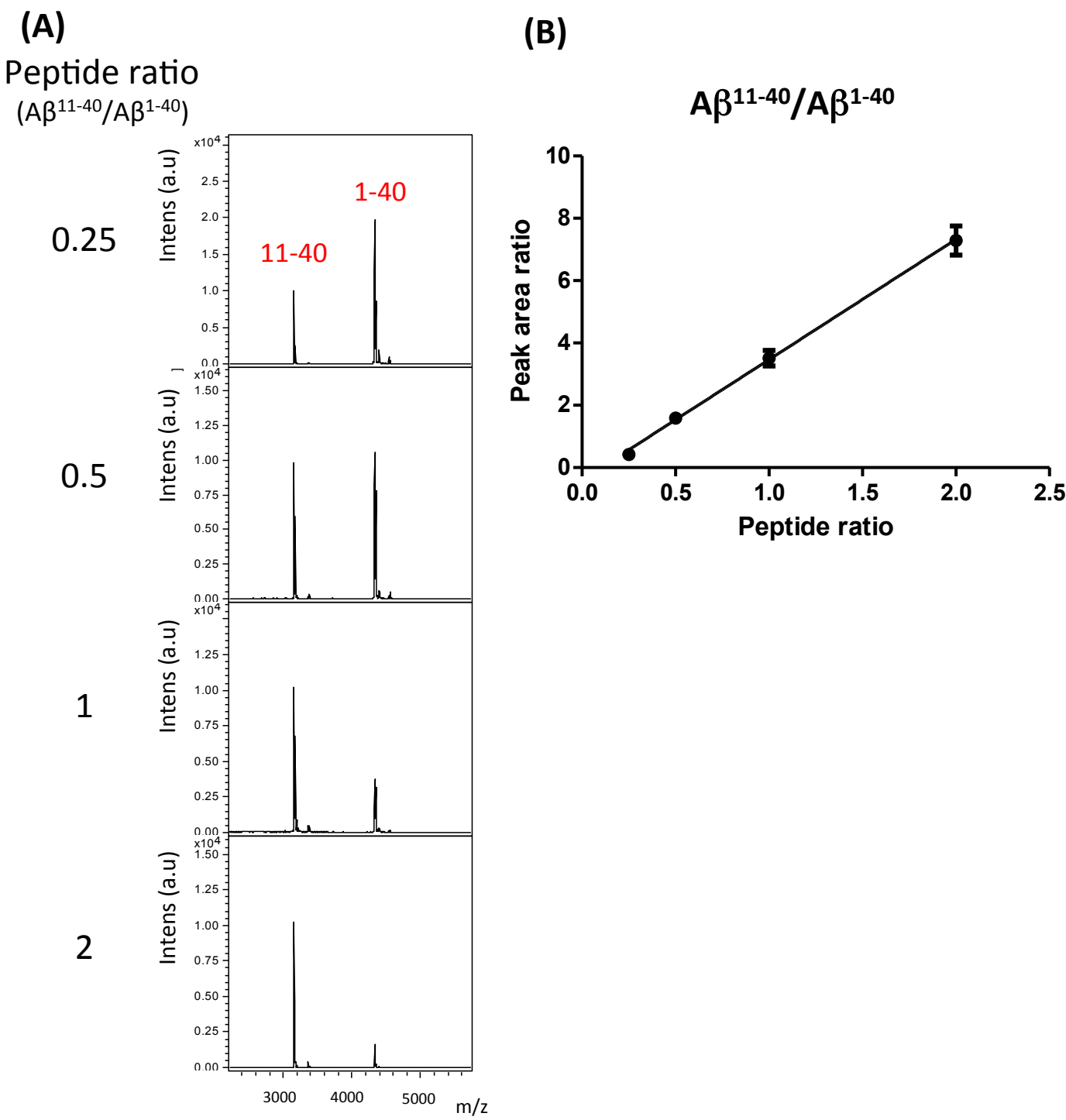


Figure S2. Quantitative accuracy of mass spectrometric analysis of $A\beta^{1-40}$ and $A\beta^{11-40}$.

Various ratios of $A\beta^{1-40}$ and $A\beta^{11-40}$ peptides mixture were subject to mass spectrometric analysis. Indicated ratios of $A\beta^{11-40}$ to $A\beta^{1-40}$ in amounts were analyzed **(A)**, and the relationship between peak areas and amount ratios was shown as a quantitative accuracy of the ratio of $A\beta^{11-40}/A\beta^{1-40}$ **(B)**. The peak area ratio and amount ratio of $A\beta^{11-40}/A\beta^{1-40}$ increased proportionally ($R^2= 0.9628$, $p<0.0001$).