

Product datasheet

Beta Secretase Activity Assay Kit (Fluorometric) ab65357

★★★★★ [1 Abreviews](#) [33 References](#) [4 Images](#)

Overview

Product name	Beta Secretase Activity Assay Kit (Fluorometric)
Detection method	Fluorescent
Sample type	Urine, Serum, Plasma, Other biological fluids, Cell Lysate, Cell culture media, Tissue Lysate
Assay type	Enzyme activity
Assay time	1h 00m
Species reactivity	Reacts with: Mammals, Other species
Product overview	Beta Secretase Activity Assay Kit (ab65357) uses a convenient fluorescence method for detecting beta secretase activity in biological and purified samples.

The beta secretase assay protocol uses a secretase-specific peptide conjugated to two reporter molecules, EDANS and DABCYL. In the uncleaved form, the fluorescent signal from EDANS is quenched by the physical proximity of the DABCYL moiety. Cleavage of the peptide by beta secretase physically separates EDANS and DABCYL allowing for the release of a fluorescent signal. The level of secretase enzymatic activity in samples is proportional to the level of fluorescence intensity.

Notes

This product is manufactured by BioVision, an Abcam company and was previously called K360 Beta-Secretase Activity Fluorometric Assay Kit. K360-100 is the same size as the 100 test size of ab65357.

β -Secretase (Beta secretase) is responsible for the proteolytic process of the amyloid precursor protein (APP). It cleaves APP at the N-terminus of the A-beta peptide sequence, between residues 671 – 672, leading to the generation and extracellular release of beta-cleaved soluble APP, and a corresponding cell-associated C-terminal fragment which is later released by gamma-secretase. It has been implicated to be an excellent target for anti-amyloid therapy for the treatment of Alzheimer's disease.

The standard is affinity purified.

Platform

Microplate reader

Properties

Storage instructions

Store at -80°C. Please refer to protocols.

Components	100 tests
β-Secretase Substrate	1 x 200μl
β-Secretase Extraction Buffer	1 x 25ml
β-Secretase Inhibitor Control	1 x 100μl
β-Secretase Reaction Buffer	1 x 10ml
Active β-Secretase	1 x 20μl

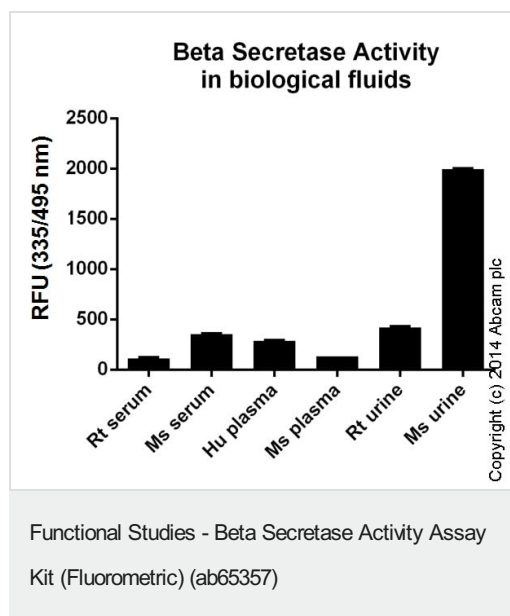
Relevance

Beta secretase is a protease responsible for the proteolytic processing of the amyloid precursor protein (APP). Amyloid beta peptide is the major constituent of amyloid plaques in the brains of individuals afflicted with Alzheimers disease. This peptide is generated from the beta-amyloid precursor protein (beta APP) in a two-step process. The first step involves cleavage of the extracellular, amino-terminal domain of beta APP. Protein cleavage is performed by an aspartyl protease termed beta-secretase (BACE), of which there are two isoforms, BACE1 and 2. Beta APP cleavage by beta-secretase results in the cellular secretion of a segment of beta APP and a membrane-bound remnant. This remnant is then processed by another protease termed gamma-secretase. Gamma-secretase cleaves an intra-membrane site in the carboxyl-terminal domain of beta APP, thus generating the amyloid beta peptide.

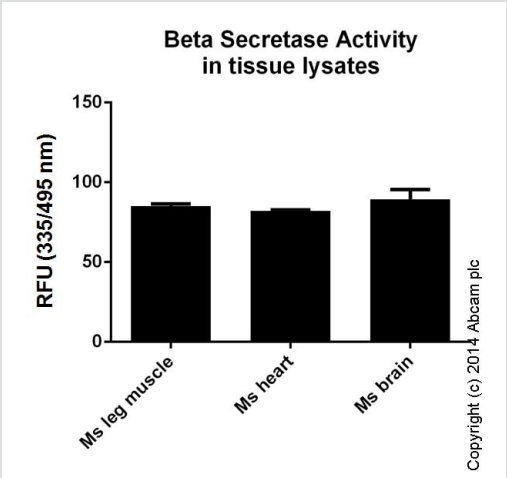
Cellular localization

Membrane; Single-pass type I membrane protein.

Images

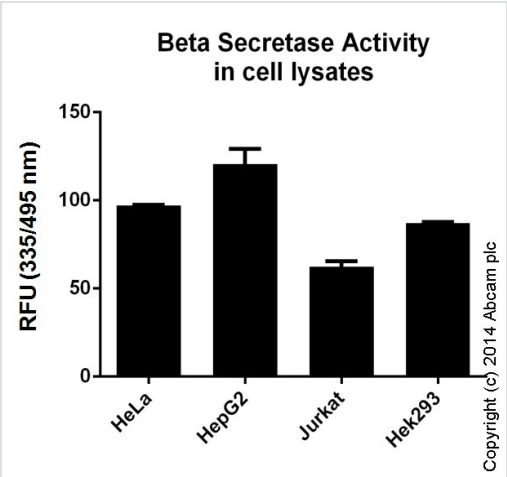


Beta Secretase Activity measured in biological fluids. Tested neat.



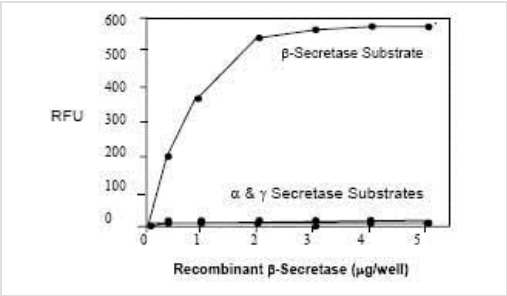
Beta Secretase Activity measured in tissue lysates (each with protein concentration of 4 mg/mL)

Functional Studies - Beta Secretase Activity Assay
Kit (Fluorometric) (ab65357)



Beta Secretase Activity measured in cell lysates (each with concentration of 2e7 cells/mL).

Functional Studies - Beta Secretase Activity Assay
Kit (Fluorometric) (ab65357)



Beta-Secretase Cleavage Activity assayed using ab65357.

Functional Studies - Beta Secretase Activity Assay
Kit (Fluorometric) (ab65357)

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