

Human CellExp BACE1, human recombinant protein (Native)
BACE1, ASP2, BACE, FLJ90568, HSPC104, KIAA1149, Beta-secretase-1, memapsin-2,
aspartyl-protease-2, b
Catalog # PBV11021r

Specification

Human CellExp BACE1, human recombinant protein (Native) - Product info

Primary Accession
Calculated MW

[P56817](#)

This protein contains no “tags” and has a calculated MW of 49 kDa. The predicted N-terminus is Thr22. DTT-reduced protein migrates as 50-65 kDa polypeptide in SDS-PAGE due to glycosylation. KDa

Human CellExp BACE1, human recombinant protein (Native) - Additional Info

Gene ID

23621

Gene Symbol

BACE1

Other Names

BACE1, ASP2, BACE, FLJ90568, HSPC104, KIAA1149, Beta-secretase-1, memapsin-2, aspartyl-protease-2, beta-site-APP-cleaving-enzyme-1

Gene Source

Human

Source

HEK293 cells

Assay&Purity

SDS-PAGE; ≥98%

Assay2&Purity2

N/A;

Recombinant

Yes

Results

Measured by its ability to cleave a fluorescent peptide substrate Mca-Ser-Glu-Val-Asn-Leu-Asp-Ala-Glu-Phe-Arg-Lys(Dnp)-Arg-Arg-NH₂. Cleavage of the substrate can be measured using excitation and emission wavelengths of 320 and 405 nm, respectively. The specific activity is > 7.5 pmoles /min / µg.

Target/Specificity

BACE1

Application Notes

Centrifuge the vial prior to opening. Reconstitute in sterile PBS, pH 7.4 to a concentration of 50 µg/ml. Do not vortex. This solution can be stored at 2-8°C for up to 1 month. For extended storage, it is recommended to store at -20°C.

Format

Lyophilized

Storage

-20°C; Lyophilized from 0.22 µm filtered solution in PBS, pH7.4. Generally 5-8% Mannitol or trehalose is added as a protectant before lyophilization.

Human CellExp BACE1, human recombinant protein (Native) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Human CellExp BACE1, human recombinant protein (Native) - Images

Human CellExp BACE1, human recombinant protein (Native) - Background

Beta-secretase 1 (BACE1), also known as beta-site APP cleaving enzyme 1 (beta-site amyloid precursor protein cleaving enzyme 1), memapsin-2 (membrane-associated aspartic protease 2), and aspartyl protease 2 (ASP2), β -Secretase, and is a member of the peptidase A1 protein family, BACE1 is a type I integral membrane glycoprotein and aspartic protease that is found mainly in the Golgi. BACE1 is an aspartic-acid protease important in the pathogenesis of Alzheimer's disease, and in the formation of myelin sheaths in peripheral nerve cells.[1] The transmembrane protein contains two active site aspartate residues in its extracellular protein domain and may function as a dimer. This protease is responsible for the proteolytic processing of the amyloid precursor protein (APP). Generation of the 40 or 42 amino acid-long amyloid- β peptides that aggregate in the brain of Alzheimer's patients requires two sequential cleavages of the APP. Extracellular cleavage of APP by BACE creates a soluble extracellular fragment and a cell membrane-bound fragment referred to as C99. The elevation of BACE1 levels can be induced by amyloid plaques surrounding neurons at early stages of pathology before neuron death occurs, and may drive a positive-feedback loop in AD.

Human CellExp BACE1, human recombinant protein (Native) - References

Vassar R., et al. Science 286:735-741(1999).
Sinha S., et al. Nature 402:537-540(1999).
Yan R., et al. Nature 402:533-537(1999).
Hussain I., et al. Mol. Cell. Neurosci. 14:419-427(1999).
Michel B., et al. Submitted (JAN-2001) to the EMBL/GenBank/DDBJ databases.