Recombinant Human BACE1/ASP2 Protein (His Tag)

Catalog Number: PKSH031901

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

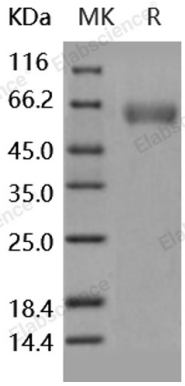
Description

Species	Human
Source	HEK293 Cells-derived Human BACE1/ASP2 protein Met 1-Thr 457, with an C-terminal His
Calculated MW	49.9 kDa
Observed MW	60-65 kDa
Accession	NP_036236.1
Bio-activity	Measured by its ability to cleave a fluorogenic peptide substrate, Mca-SEVNLDAEFRK (Dpn) RR-NH2, R &D Systems, Catalog # ES004. The specific activity is > 1. 5 pmoles/min/μg.

Properties

Purity	> 95% as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS, pH 7.4 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 95 % as determined by reducing SDS-PAGE.

Background

Beta-site APP-cleaving enzyme 1 (BACE1) is an aspartic-acid protease important in the formation of myelin sheaths in peripheral nerve cells. In the brain; This protein is expressed highly in the substantia nigra; locus coruleus and medulla oblongata. Strong BACE1 expression has also been described in pancreatic tissue. BACE1 has a pivotal role in the pathogenesis of Alzheimer's disease. In Alzheimer's disease patients; BACE1 levels were elevated although mRNA levels were not changed. It has been found that BACE1 gene expression is controlled by a TATA-less promote r. The translational repression as a new mechanism controlling its expression. And the low concentrations of Ca (2+) (microM range) significantly increased the proteolytic activity of BACE1. Furthermore; BACE1 protein is ubiquitinated; and the degradation of BACE1 proteins and amyloid precursor protein processing are regulated by the ubiquitin-proteasome pathway. It has also been identified as the rate limiting enzyme for amyloid-beta-peptide (Abeta) production.

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