

Recombinant Human BACE1/ASP2 Protein (Fc Tag)

Catalog Number:PKSH031902



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

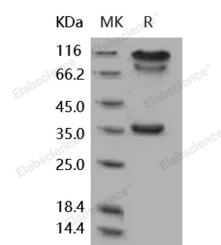
Description

| | |
|------------------------------------|---|
| Synonyms | ASP2;BACE;HSPC104 |
| Species | Human |
| Expression Host | HEK293 Cells |
| Sequence | Met 1-Thr 457 |
| Accession | NP_036236.1 |
| Calculated Molecular Weight | 75.0 kDa |
| Observed molecular weight | 100-105 kDa |
| Tag | C-hFc |
| Bioactivity | Measured by its ability to cleave a fluorogenic peptide substrate, Mca-SEVNLDLAEFRK(Dpn)RR-NH2, (R&D Systems, Catalog # ES004). The specific activity is > 0.5 pmoles/min/μg. |

Properties

| | |
|-----------------------|---|
| Purity | > 90 % 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% Tween80 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



> 90 % 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 promoter. The

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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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