

## Recombinant Human BACE1/ASP2 Protein (His Tag)

**Catalog Number:** PKSH031901

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

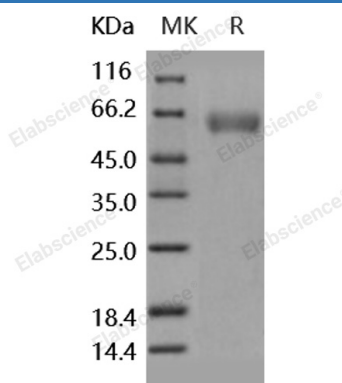
### Description

<b>Species</b>	Human
<b>Source</b>	HEK293 Cells-derived Human BACE1/ASP2 protein Met 1-Thr 457, with an C-terminal His
<b>Calculated MW</b>	49.9 kDa
<b>Observed MW</b>	60-65 kDa
<b>Accession</b>	NP_036236.1
<b>Bio-activity</b>	Measured by its ability to cleave a fluorogenic peptide substrate, Mca-SEVNLDAEFRK(Dpn)RR-NH <sub>2</sub> , R&D Systems, Catalog # ES004. The specific activity is > 1.5 pmoles/min/μg.

### Properties

<b>Purity</b>	> 95 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per μg of the protein as determined by the LAL method.
<b>Storage</b>	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.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from sterile PBS, pH 7.4 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
<b>Reconstitution</b>	Please refer to the specific buffer information in the printed manual. Please refer to the printed manual for detailed information.

### Data



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### Background

### For Research Use Only

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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 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.