

## Datasheet for ABIN7318053 **BACE1 Protein**



[Go to Product page](#)

### Overview

Quantity:	100 µg
Target:	BACE1
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Biological Activity:	Active

### Product Details

Purpose:	Recombinant Human BACE1/ASP2 Protein (Active)
Sequence:	Met 1-Thr 457
Characteristics:	The mature form of human BACE1 (NP_036236.1) extracellular domain (Met1-Thr 457) with a quinary-aa peptide (DDDDK) at the C-terminus was expressed and purified.
Purity:	> 95 % as determined by reducing SDS-PAGE.
Endotoxin Level:	< 1.0 EU per µg as determined by the LAL method.
Biological Activity Comment:	Measured by its ability to cleave a fluorescent peptide substrate Mca-Ser-Glu-Val-Asn-Leu-Asp-Ala-Glu-Phe-Arg-Lys(Dpn)-Arg-Arg-NH <sub>2</sub> (Catalog# ES004, R&D Systems). Cleavage of ES004 can be measured using excitation and emission wavelength of 320 and 405 nm, respectively. The specific activity is >3.5 pmoles/min/µg.

### Target Details

Target:	BACE1
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## Target Details

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Alternative Name: BACE1 ([BACE1 Products](#))

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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 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.

Synonym: ASP2,BACE,HSPC104

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Molecular Weight: 49 kDa

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NCBI Accession: [NP\\_036236](#)

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## Application Details

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Restrictions: For Research Use only

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## Handling

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Format: Lyophilized

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Reconstitution: Please refer to the printed manual for detailed information.

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Buffer: Lyophilized from sterile 50 mM Tris, 100 mM NaCl, pH 8.0

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Storage: 4 °C,-20 °C,-80 °C

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Storage Comment: 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.