

## BACE1 Protein, Human (HEK293, N-His)

Cat. No.:	HY-P700606
Synonyms:	Beta-secretase 1; ASP2; Memapsin-2; BACE1; BACE; KIAA1149
Species:	Human
Source:	HEK293
Accession:	P56817-1 (T22-T457)
Gene ID:	23621
Molecular Weight:	56-85 kDa

### PROPERTIES

AA Sequence	<p>T Q H G I R L P L R      S G L G G A P L G L      R L P R E T D E E P      E E P G R R G S F V</p> <p>E M V D N L R G K S      G Q G Y Y V E M T V      G S P P Q T L N I L      V D T G S S N F A V</p> <p>G A A P H P F L H R      Y Y Q R Q L S S T Y      R D L R K G V Y V P      Y T Q G K W E G E L</p> <p>G T D L V S I P H G      P N V T V R A N I A      A I T E S D K F F I      N G S N W E G I L G</p> <p>L A Y A E I A R P D      D S L E P F F D S L      V K Q T H V P N L F      S L Q L C G A G F P</p> <p>L N Q S E V L A S V      G G S M I I G G I D      H S L Y T G S L W Y      T P I R R E W Y Y E</p> <p>V I I V R V E I N G      Q D L K M D C K E Y      N Y D K S I V D S G      T T N L R L P K K V</p> <p>F E A A V K S I K A      A S S T E K F P D G      F W L G E Q L V C W      Q A G T T P W N I F</p> <p>P V I S L Y L M G E      V T N Q S F R I T I      L P Q Q Y L R P V E      D V A T S Q D D C Y</p> <p>K F A I S Q S S T G      T V M G A V I M E G      F Y V V F D R A R K      R I G F A V S A C H</p> <p>V H D E F R T A A V      E G P F V T L D M E      D C G Y N I P Q T D      E S T L M T</p>
Biological Activity	Measured by its ability to cleave a fluorogenic peptide substrate, Mca-SEVNLDAEFRK(Dpn)RR-NH <sub>2</sub> . Read at excitation and emission wavelengths of 320 nm and 405 nm. The specific activity is 173.598 pmol/min/μg, as measured under the described conditions.
Appearance	Lyophilized powder.
Formulation	Lyophilized a 0.2 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

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## DESCRIPTION

### Background

The BACE1 protein plays a pivotal role in the proteolytic processing of the amyloid precursor protein (APP). It initiates cleavage at the N-terminus of the A-beta peptide sequence, specifically between residues 671 and 672 of APP, resulting in the production and subsequent extracellular release of beta-cleaved soluble APP. Simultaneously, BACE1 generates a corresponding cell-associated C-terminal fragment, subsequently released by gamma-secretase. In addition to its primary target, BACE1 also exhibits cleavage activity on CHL1, as observed through its similarity in cleaving this substrate.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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