Data Sheet (Cat.No.TMPY-03065)

TargetMol

BACE2 Protein, Mouse, Recombinant (His)

General Information

Synonyms:	CEAP1;BAE2;1110059C24Rik;β-site APP-cleaving enzyme 2;CDA13;beta-site APP-cleaving enzyme 2;ALP56;AI850424;AEPLC;DRAP;ARP1;ASP21
Protein Construction:	A DNA sequence encoding the mouse BACE2 (Q9JL18) (Met1-Pro462) was expressed with a C-terminal polyhistidine tag. Predicted N terminal: Ala 20
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q9JL18
Molecular Weight:	49.2 kDa (predicted); 55 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by its ability to cleave a fluorogenic peptide substrate Mca-KPLGL-Dpa-AR-NH2 . The specific activity is >50 pmoles/min/μg.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Shipping:

In general, Lyophilized powders are shipping with blue ice.

Protein Background

BACE2, also known as beta secretase 2, belongs to the peptidase A1 family. It is a protease known to be an important enzyme involved in the cellular pathways. BACE2 has been shown to interact with GGA1 and GGA2. It is the major β-secretase in vivo. BACE2 is located on chromosome 21 and may play a role in alzheimer's disease pathogenesis in down syndrome(DS). Overexpression of BACE2 by lentivirus markedly reduced amyloid β protein production in primary neurons. Despite an extra copy of the BACE2 gene in DS and the increase of its transcription,

BACE2 protein levels are unchanged.

Reference

Hussain I, et al. (2001) Prodomain processing of Asp1 (BACE2) is autocatalytic. J Biol Chem. 276(26):23322-8.
Solans A, et al. (2000) A new aspartyl protease on 21q22.3, BACE2, is highly similar to Alzheimer's amyloid precursor protein beta-secretase. Cytogenet Cell Genet. 89(3-4): 177-84.
Hussain I, et al. (2001) ASP1 (BACE2) cleaves the amyloid precursor protein at the beta-secretase site. Mol Cell Neurosci. 16(5):609-19.

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