

**Synonym**

Acylcholine acylhydrolase; BCHE; Butyrylcholine esterase;  
Butyrylcholinesterase; CHE1; CHE1cholinesterase; Choline esterase II;  
cholinesterase 1; E1; EC 3.1.1.8; Pseudocholinesterase

**Source**

Human BCHE, His Tag (BHE-H52H3) is expressed from human 293 cells (HEK293). It contains AA Glu 29 - Leu 602 (Accession # [P06276-1](#)).

Predicted N-terminus: Glu 29

**Molecular Characterization**

BCHE(Glu 29 - Leu 602) P06276-1	Poly-his
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This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 67.0 kDa. The protein migrates as 90-100 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

**Endotoxin**

Less than 1.0 EU per  $\mu\text{g}$  by the LAL method.

**Purity**

>95% as determined by SDS-PAGE.

**Formulation**

Lyophilized from 0.22  $\mu\text{m}$  filtered solution in 50 mM Tris, 150 mM NaCl, pH8.0. Normally trehalose is added as protectant before lyophilization.

Contact us for customized product form or formulation.

**Reconstitution**

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

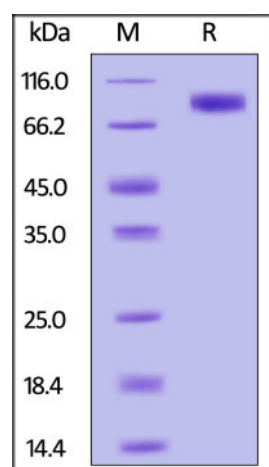
**Storage**

For long term storage, the product should be stored at lyophilized state at  $-20^{\circ}\text{C}$  or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

- $-20^{\circ}\text{C}$  to  $-70^{\circ}\text{C}$  for 12 months in lyophilized state;
- $-70^{\circ}\text{C}$  for 3 months under sterile conditions after reconstitution.

**SDS-PAGE**

Human BCHE, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

**Bioactivity**

Measured by its ability to cleave Butyrylthiocholine. The specific activity is  $>12,0000$  pmol/min/ $\mu\text{g}$ , as measured under the described conditions (QC tested).

## Background

BCHE (also known as Butyrylcholinesterase, pseudocholinesterase, plasma cholinesterase, or BuChE) is a nonspecific cholinesterase enzyme that hydrolyzes many different choline esters. Both acetylcholinesterase and butyrylcholinesterase represent therapeutic targets for ameliorating the cholinergic deficit considered to be responsible for the declines in cognitive, behavioral and global functioning characteristic of Alzheimer's disease (AD).

## Clinical and Translational Updates

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.