

# Recombinant Human Butyrylcholinesterase/BCHE Protein (His Tag)



Catalog Number:PKSH030934

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

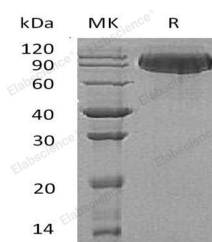
## Description

<b>Synonyms</b>	Cholinesterase;Acylcholine Acylhydrolase;Butyrylcholine Esterase;Choline Esterase II;Pseudocholinesterase;BCHE;CHE1
<b>Species</b>	Human
<b>Expression Host</b>	HEK293 Cells
<b>Sequence</b>	Met 1-Leu 602
<b>Accession</b>	NP_000046.1
<b>Calculated Molecular Weight</b>	66.5 kDa
<b>Tag</b>	C-His
<b>Bioactivity</b>	Measured by its ability to cleave Butyrylthiocholine. The specific activity is > 50,000 pmoles/min/μg.

## Properties

<b>Purity</b>	> 97 % 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% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

## Data



> 97 % as determined by reducing SDS-PAGE.

## Background

Butyrylcholinesterase (BCHE), also known as cholinesterase or BuChE, is an enzyme defined as "pseudo" or "non-neuronal" cholinesterase. Butyrylcholinesterase (BCHE) is widely distributed in the nervous system as well as blood plasma. It is constitutively similar to the neuronal acetylcholinesterase, and is a non-specific cholinesterase which hydrolyses many different choline esters. Butyrylcholinesterase (BCHE) is a glycoprotein of 4 identical subunits, that were arranged as a dimer of dimers with each dimer composed of two identical subunits joined by interchain disulfide bonds. Butyrylcholinesterase (BCHE) behaves principally similar to the true enzyme and thus can play a similar role in

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nerve conduction, although it participates probably only in relatively slow conductive processes and could be involved in other nervous system functions and in neurodegenerative diseases. It can hydrolyze toxic esters such as cocaine or scavenge organophosphorus pesticides and nerve agents. Purified human serum cholinesterase combines in its active surface an anionic and an esteratic site, similar to true cholinesterase. It has been demonstrated that butyrylcholinesterase (BCHE) may have a greater role in cholinergic transmission than previously surmised, making BChE inhibition an important therapeutic goal in Alzheimer's disease.

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