Data Sheet (Cat.No.TMPY-01693)

TargetMol

Butyrylcholinesterase Protein, Human, Recombinant (His)

General Information

Synonyms:	CHE1;E1;butyrylcholinesterase;CHE2
Protein Construction:	Glu29-Leu602
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P06276
Molecular Weight:	66.18 kDa (Predicted); 70-110 kDa (Reducing conditions due to glycosylation)

QC Testing

Biological Activity:	Measured by its ability to cleave Butyrylthiocholine. The specific activity is > 70000 pmoles/min/μg. (QC Test)
Purity:	> 95% as determined by Tris-Bis PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from 0.22 μm filtered solution in 50 mM Tris, 150 mM Nacl (pH 8.0). Normally 8% trehalose is added as protectant before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

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.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Butyrylcholinesterase is a serine hydrolase biochemically related to the cholinergic enzyme acetylcholinesterase. It is capable of hydrolyzing esters of choline. Butyrylcholinesterase has unique enzymatic properties and is widely distributed in the nervous system, raising the possibility of its involvement in neural function.

Reference

Lockridge O. (1988) Structure of human serum cholinesterase. Bio Essays. 9(4):125-8.
Mesulam M,et al.(2002) Widely Spread Butyrylcholinesterase Can Hydrolyze Acetylcholine in the Normal and Alzheimer Brain. Neurobiology of Disease. 9(1): 88-93.
Nicolet Y,et al.(2003) Crystal Structure of Human Butyrylcholinesterase and of Its Complexes with Substrate and Products. The Journal of Biological Chemistry. 278: 41141-7.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481