Creative Enzymes®

Native Human erythrocytes Acetylcholinesterase

Cat. No. NATE-0019

Lot. No. (See product label)

Introduction

Description Acetylcholinesterase, also known as AChE or acetylhydrolase, is a hydrolase that hydrolyzes the neurotransmitter acetylcholine. AChE is found at mainly neuromuscular junctions and cholinergic brain synapses, where its activity serves to terminate synaptic transmission. It belongs to carboxylesterase family of enzymes. It is the primary target of inhibition by organophosphorus compounds such as nerve agents and pesticides.

Applications Acetylcholinesterase (AChE) from Creative Enzymes has been used in the structure-activity study of phosphoramido acid esters as inhibitors of AChE.

Synonyms true cholinesterase; choline esterase I; cholinesterase; acetylthiocholinesterase; acetylcholine hydrolase; acetyl; β-methylcholinesterase; AcCholE; EC 3.1.1.7; 9000-81-1; Acetylcholinesterase; AChE; acetylhydrolase

Product Information

Species Human

Source Human erythrocytes

Form buffered aqueous solution. Solution in 20 mM HEPES, pH 8.0, containing 0.1% TRITON X-100

EC Number EC 3.1.1.7

CAS No. 9000-81-1

Molecular Weight ~80 kDa

Activity > 500 units/mg protein (BCA)

Pathway ATF-2 transcription factor network, organism-specific biosystem; Acetylcholine Synthesis, organism-specific biosystem; Biogenic Amine Synthesis, organism-specific biosystem; Cholinergic synapse, organism-specific biosystem; Glycerophospholipid metabolism, organism-specific biosystem; Glycerophospholipid metabolism, conserved biosystem; Monoamine Transport, organism-specific biosystem

Function acetylcholine binding; acetylcholine binding; acetylcholinesterase activity; acetylcholinesterase activity; beta-amyloid binding; carboxylesterase activity; cholinesterase activity; collagen binding; hydrolase activity; laminin binding; protein binding; protein homodimerization activity; protein homodimerization activity; protein self-association; serine hydrolase activity

Unit Definition One unit will hydrolyze 1.0 µmole of acetylthiocholine iodide per min at pH 7.4 at 37°C.

Storage and Shipping Information

Storage 2-8°C