Creative Enzymes®

Native Bovine Cholesterol Esterase

Cat. No. NATE-0114

Lot. No. (See product label)

Introduction

Description

Cholesterol esterase (CE) is a reversible enzyme that can hydrolyze or synthesize fatty acid esters of cholesterol and other sterols. Hydrolysis of water insoluble long chain fatty acid esters requires bile salt activation. Hydrolysis of water soluble esters of short chain fatty acids and lysophospholipids does not require activation by bile salts. It also hydrolyzes tri-, di-, and mono-acylglycerols, phospholipids, lysophospholipids, and ceramide. This monomeric glycoprotein may have multiple functions in lipid and lipoprotein metabolism, as well as in atherosclerosis.

Applications

Cholesterol esterase bound to membrane-associated heparin on brush border membranes aids in the transport of cholesterol and free fatty acid across the membrane. This enzyme is widely used in the determination of serum cholesterol in clinical laboratories. The enzyme from Creative Enzymes has been used to evaluate the inhibitory and antioxidant functions of the methanol extract of the Camellia sinensis leaves under in vitro conditions. The enzyme has also been used to digest human serum samples to confirm the presence and position of acyl esters of 7α-hydroxycholesterol.

Synonyms

cholesterol esterase; cholesteryl ester synthase; triterpenol esterase; cholesteryl esterase; cholesteryl ester hydrolase; sterol ester hydrolase; cholesterol ester hydrolase; cholesterase; acylcholesterol lipase; EC 3.1.1.13; 9026-00-0; sterol esterase; CE

Product Information

Species

Bovine

Source

Bovine pancreas

Form

Lyophilized powder. This product is partially purified from bovine pancreas and is supplied as an off-white to tan lyophilized powder containing 30-65% protein (biuret), potassium phosphate.

EC Number

EC 3.1.1.13

CAS No.

9026-00-0

Activity

> 200 units/g protein

pH Stability

42529

Activators

Bisphenol A diglycidyl ether, cAMP-dependent protein kinase type II, ethanol, methanol, n-butanol, phosphatidylcholine, phosphatidylethanolamine, sodium taurocholic acid

Inhibitors

Bisphenol A methacrylate, diisopropylfluorophosphate, enolase, Hg2+, sodium fluoride, phosphatidic acid, phosphatidylcholine, phosphatidylserine

Unit Definition

One unit will hydrolyze 1.0 µmole of cholesteryl oleate to cholesterol and oleic acid per minute at pH 7.0 at 37°C in the presence of taurocholate.

Storage and Shipping Information

Storage	−20°C