Creative Enzymes®

15-Lipoxygenase-2 from human, Recombinant

Cat. No. NATE-1248

Lot. No. (See product label)

Introduction

Description Two types of 15-lipoxygenase (15-LO) have been discovered and characterized, both of which metabolize arachidonic acid (AA) to produce 15(S)-hydroxyeicosatetraenoic acid (15(S)-HETE). 15-LO-1 oxygenates AA at both C-15 and C-12, whereas 15-LO-2 exclusively oxygenates C-15 of AA. Human 15-LO-2 has a molecular mass of approximately 76 kDa and exhibits approximately 40% identity to the reticulocyte 15-LO-1. Expression of 15-LO-2 appears to be restricted to prostate, lung, skin, and cornea and may play a role in the normal development of these tissues. The protein levels and enzymatic activity of 15-LO-2 are both down-regulated in prostate cancer compared with normal and benign prostate tissues, implicating a possible protective role for 15-LO-2 against tumor formation.

Synonyms Arachidonate 15-lipoxygenase type II; 15-lipoxygenase-2; 15-LO-2; 15-LOX-2; ALOX15B

Product Information

Species Human

Source E. coli

Form PBS, pH 7.4, 1 mM DTT and 20% glycerol

EC Number EC 1.13.11.33

Molecular Weight 76 kDa

Purity > 95% estimated by SDS-PAGE

Activity 234.15 U/ml

Unit Definition 1 unit is defined as the amount of enzyme required to produce 1 nmol of 15-HpETE per min at 30°C in 50 mM Tris-HCl, pH 7.2, containing 0.003% Tween, and 250 μM arachidonic acid.

Storage and Shipping Information

Storage at -80°C

Stability As supplied, 6 months from the QC date provided on the Certificate of Analysis, when stored properly