12-Lipoxygenase (porcine leukocyte)

Catalog No. 60300  •  Lot No. XXXXX

Synonyms: 12-LO; Porcine Leukocyte Lipoxygenase
Source: Porcine leukocytes
EC: 1.13.11.31
Mₜ: 72 kDa • Monomer
Purity: 100,000 x g supernatant
Stability: ≥1 year at -80°C
Supplied in: 20 mM phosphate buffer, pH 7.5
Specific activity: XX units/mg
Protein concentration: XX mg/ml
Activity concentration: XX units/ml
Unit definition: One unit of enzyme consumes one nanomole of oxygen per minute at 25°C in 0.1 M Tris-HCl buffer, pH 7.5, containing 5 mM EDTA, 0.03% Tween 20, and 100 μM arachidonate. 12-Lipoxygenase activity is measured at 25°C by monitoring oxygen consumption using a Gilson Model 5/6 H oxygraph equipped with a Clark oxygen electrode.

Laboratory Procedures

12-Lipoxygenase (12-LO) is stable for at least one year when stored at -80°C. Repeated thawing and refreezing will inactivate the enzyme. In the event that only a portion of the enzyme is to be used in a single experiment, it is recommended that the enzyme be aliquotted into smaller sizes and frozen at -80°C. The enzyme loses about 10% of its original activity upon storage. 12-LO is relatively unstable at room temperature. Hence, to prevent loss of activity when performing experiments, keep the stock vial of the enzyme on ice (0-4°C) at all times.

12-LO from porcine leukocytes is a 72 kDa protein. The 12-LO from porcine leukocytes is similar to the 12-LO from human platelets in that both oxidize arachidonic acid to 12(S)-HpETE. However, only the porcine leukocyte enzyme catalyzes the 12(S)-oxygenation of 5(S)-HETE. 12-LO from porcine leukocytes exhibits 14(R)-oxygenase and 14,15-leukotriene A synthase activities with 15-HpETE as substrate.

References


Related Products

12(S)-HpETE - Cat. No. 44570 • Arachidonic Acid - Cat. No. 90010 • 12-Lipoxygenase (human) Polyclonal Antiserum - Cat. No. 160302 • 12-Lipoxygenase (murine leukocyte) Polyclonal Antiserum - Cat. No. 160304

WARNING: This product is for laboratory research only; not for administration to humans. Not for human or veterinary diagnostic or therapeutic use.

Materials Safety Data Sheet

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This product contains none, but may all of the information required for the safe and proper use of this material. Before use, the user must review the material safety data sheet, which has been sent via email to your institution.

Warranty and Limitation of Remedy

Cayman Chemical Company makes no warranty or guarantee of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman warrants only to the original customer that the material will meet our specifications at the time of delivery.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have any obligation or liability, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer's exclusive remedy and Cayman's sole liability hereunder shall be limited to a refund of the purchase price, or at Cayman's option, the replacement, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our Warranty and Limitation of Remedy located on our website and in our catalog.