

PRODUCT INFORMATION



5-Lipoxygenase (human recombinant)

Item No. 60402

Overview and Properties

Synonyms: Arachidonate 5-lipoxygenase, 5-LO, 5-LOX
Source: Active recombinant human protein expressed in insect cells
Uniprot No.: P09917
Molecular Weight: 78 kDa
Storage: -80°C (as supplied)
Stability: ≥6 months
Supplied in: A clarified lysate, in 100 mM Tris-HCl, pH 8.0, containing 5 mM EGTA, 1 mM CaCl₂, and 30% glycerol

Protein

Concentration: *batch specific* mg/ml
Activity: *batch specific* U/ml
Specific Activity: *batch specific* U/mg
Unit Definition: One unit of enzyme consumes one nmol of oxygen per minute at 25°C in 50 mM Tris-HCl buffer, pH 7.5, containing 100 μM arachidonate, 2 mM CaCl₂, 1 mM ATP, 4.6 μM 13(S)-HpODE, and 250 μM oxygen. 5-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.

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Analytical Data

NOTE: This product is not suitable for use with the Lipoxygenase Inhibitor Screening Assay Kit (Item No. 760700). If you are interested in using a Cayman 5-LO with this kit, please see our 5-LO (potato) Screening Enzyme (Item No. 60401). Also, since 5-LO is a relatively unstable enzyme, keep the stock vial of the enzyme on ice (0-4°C) at all times when performing experiments. The enzyme should be added to the incubation medium (assay mixture) immediately prior to initiation of the experiment.

Description

Catalyzes the formation of 5(S)-HpETE from arachidonic acid as well as its subsequent conversion to leukotriene A₄; localized in the cytosol of resting human and rat peripheral blood neutrophils or in the nucleus in rat basophilic leukemia cells and human alveolar macrophages; translocates to the nuclear membrane to associate with FLAP upon cell stimulation.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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