

Recombinant Human ALOX5 Protein

Cat. No. ALOX5-053H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Active recombinant human ALOX5 protein (1-674) without tag was expressed in insect cells.
Species	Human
Source	Insect Cells
ProteinLength	1-674
Description	This gene encodes a member of the lipoxygenase gene family and plays a dual role in the synthesis of leukotrienes from arachidonic acid. The encoded protein, which is expressed specifically in bone marrow-derived cells, catalyzes the conversion of arachidonic acid to 5(S)-hydroperoxy-6-trans-8,11,14-cis-eicosatetraenoic acid, and further to the allylic epoxide 5(S)-trans-7,9-trans-11,14-cis-eicosatetraenoic acid (leukotriene A₄). Leukotrienes are important mediators of a number of inflammatory and allergic conditions. Mutations in the promoter region of this gene lead to a diminished response to antileukotriene drugs used in the treatment of asthma and may also be associated with atherosclerosis and several cancers. Alternatively spliced transcript variants encoding different isoforms have been found for this gene.
Molecular Mass	78 kDa
Purity	Clarified lysate
Unit Definition	One unit of enzyme consumes one nmol of oxygen per minute at 25 centigrade in 50

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mM Tris-HCl buffer, pH7.5, containing 100µM arachidonate, 2 mM CaCl₂, 1 mM ATP, 4.6 µM 13(S)-HpODE, and 250 µM oxygen. 5-Lipoxygenase activity is measured at 25 centigrade by monitoring oxygen consumption using a Gilson Model 5/6 H oxygraph equipped with a Clark oxygen electrode.

Stability ≥ 6 months

Storage At -80 centigrade.

Storage Buffer A clarified lysate, in 100 mM Tris-HCl, pH 8.0, containing 5 mM EGTA, 1mM CaCl₂, and 30% glycerol

GENE INFORMATION

Gene Name ALOX5 arachidonate 5-lipoxygenase [Homo sapiens (human)]

Official Symbol ALOX5

Synonyms ALOX5; arachidonate 5-lipoxygenase; 5-LO; 5LPG; LOG5; 5-LOX; polyunsaturated fatty acid 5-lipoxygenase; LOX-5; arachidonic acid 5-lipoxygenase; leukotriene A4 synthase; EC 1.13.11.34

Gene ID 240

mRNA Refseq NM_000698

Protein Refseq NP_000689

MIM 152390

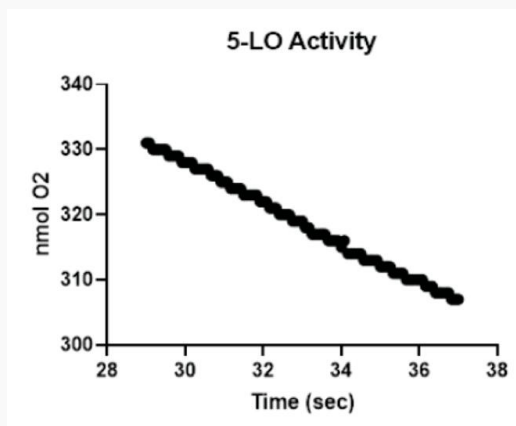
UniProt ID P09917

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