

ALOX5

Reactivity: Human Mouse Rat

Tested applications: WB IHC

Recommended Dilution: WB 1:500 - 1:2000 IHC 1:50 - 1:200

Calculated MW: 78kDa

Observed MW: Refer to Figures

Immunogen:

Recombinant protein of human ALOX5

Storage Buffer:

Store at -20. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

Synonym:

5-LO; 5-LOX; 5LPG; LOG5; MGC163204

Catalog #: A2158

Antibody Type:

Polyclonal Antibody

Species: Rabbit

Gene ID: 240

Isotype: IgG

Swiss Prot: P09917

Purity: Affinity purification

For research use only.

Background:

5-Lipoxygenase (5-LO, ALOX5) is an important catalytic enzyme responsible for the biosynthesis of leukotriene LTA4 from arachidonic acid (1,2). Leukotriene synthesis also requires 5-lipoxygenase-activating protein (FLAP, ALOX5AP), a nuclear membrane-bound protein that binds arachidonic acid and is thought to activate 5-LO. A number of related leukotrienes (i.e. B4, C4, D4) are derived from LTA4 and together these lipid mediators function in immune reaction regulation. 5-LO is primarily expressed in polymorphonuclear leukocytes, peripheral blood monocytes, macrophages, and mast cells (1,3). Overexpression of 5-LO protein is seen in certain cancer cells and is associated with poor prognosis (1,4). Depending upon the cell type, 5-LO is localized to either the cytosol or the nucleus of quiescent cells (5). Following stimulation, 5-LO translocates to the nucleus and associates with FLAP to catalyze LTA4 synthesis (2,3). Phosphorylation of specific residues can regulate 5-LO enzymatic activity. Phosphorylation of 5-LO at Ser523 by PKA family kinases inhibits oxygenase activity (6,7) while MAPKAP2 and ERK family kinase phosphorylation at Ser271 and Ser663 stimulates 5-LO enzymatic activity in vivo (8,9).

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