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**Product Name: 5-LO Rabbit Polyclonal Antibody****Catalog #: APRab06342**

For research use only.

**Summary**

<b>Description</b>	Rabbit polyclonal Antibody
<b>Host</b>	Rabbit
<b>Application</b>	WB,IHC,ICC/IF,ELISA
<b>Reactivity</b>	Human,Mouse,Rat
<b>Conjugation</b>	Unconjugated
<b>Modification</b>	Unmodified
<b>Isotype</b>	IgG
<b>Clonality</b>	Polyclonal
<b>Form</b>	Liquid
<b>Concentration</b>	1mg/ml
<b>Storage</b>	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
<b>Shipping</b>	Ice bags
<b>Buffer</b>	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
<b>Purification</b>	Affinity purification

**Application**

<b>Dilution Ratio</b>	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:50-1:200,ELISA 1:5000-1:20000
<b>Molecular Weight</b>	78kDa

**Antigen Information**

<b>Gene Name</b>	ALOX5
<b>Alternative Names</b>	ALOX5; LOG5; Arachidonate 5-lipoxygenase; 5-LO; 5-lipoxygenase
<b>Gene ID</b>	240.0
<b>SwissProt ID</b>	P09917
<b>Immunogen</b>	The antiserum was produced against synthesized peptide derived from human Arachidonate 5 Lipoxygenase. AA range:246-295

**Background**

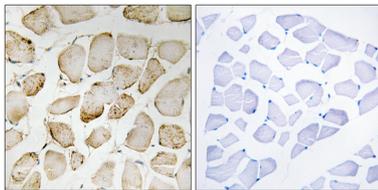
This gene encodes a member of the lipoxygenase gene family and plays a dual role in the synthesis of leukotrienes from

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. [provided by RefSeq, Jan 2012],catalytic activity:Arachidonate + O(2) = leukotriene A(4) + H(2)O.,cofactor: Binds 1 iron ion per subunit.,cofactor: Binds 2 calcium ions per subunit.,function: Catalyzes the first step in leukotriene biosynthesis, and thereby plays a role in inflammatory processes.,pathway: Lipid metabolism; leukotriene A4 biosynthesis.,PTM: Serine phosphorylation by MAPKAPK2 is stimulated by arachidonic acid. Phosphorylation on Ser-523 by PKA has an inhibitory effect. Phosphorylation on Ser-272 prevents export from the nucleus.,similarity: Belongs to the lipoxygenase family.,similarity: Contains 1 lipoxygenase domain.,similarity: Contains 1 PLAT domain.,subcellular location: Shuttles between cytoplasm and nucleus. Found exclusively in the nucleus, when phosphorylated on Ser-272. Calcium binding promotes translocation from the cytosol and the nuclear matrix to the nuclear envelope and membrane association.,subunit: Interacts with ALOX5AP and LTC4S.,

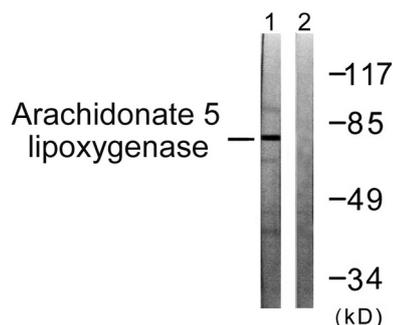
## Research Area

Arachidonic acid metabolism;

## Image Data



Immunohistochemistry analysis of paraffin-embedded human skeletal muscle tissue, using Arachidonate 5 Lipoxygenase Antibody. The picture on the right is blocked with the synthesized peptide.



Western blot analysis of lysates from HUVEC cells, using Arachidonate 5 Lipoxygenase Antibody. The lane on the right is blocked with the synthesized peptide.