

5-LO (phospho Ser272) Polyclonal Antibody

Catalog No :	YP0715
Reactivity :	Human;Mouse;Rat
Applications :	WB;IHC;IF;ELISA
Target :	5-LO
Fields :	>>Arachidonic acid metabolism;>>Metabolic pathways;>>Fc epsilon RI signaling pathway;>>Serotonergic synapse;>>Ovarian steroidogenesis;>>Toxoplasmosis
Gene Name :	ALOX5
Protein Name :	Arachidonate 5-lipoxygenase
Human Gene Id :	240
Human Swiss Prot No :	P09917
Mouse Gene Id :	11689
Mouse Swiss Prot No :	P48999
Rat Gene Id :	25290
Rat Swiss Prot No :	P12527
Immunogen :	The antiserum was produced against synthesized peptide derived from human Arachidonate 5 Lipoxygenase around the phosphorylation site of Ser271. AA range:246-295
Specificity :	Phospho-5-LO (S272) Polyclonal Antibody detects endogenous levels of 5-LO protein only when phosphorylated at S272.
Formulation :	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source :	Polyclonal, Rabbit,IgG

Dilution : WB 1:500 - 1:2000. IHC 1:100 - 1:300. ELISA: 1:10000.. IF 1:50-200

Purification : The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.

Concentration : 1 mg/ml

Storage Stability : -15°C to -25°C/1 year(Do not lower than -25°C)

Observed Band : 78kD

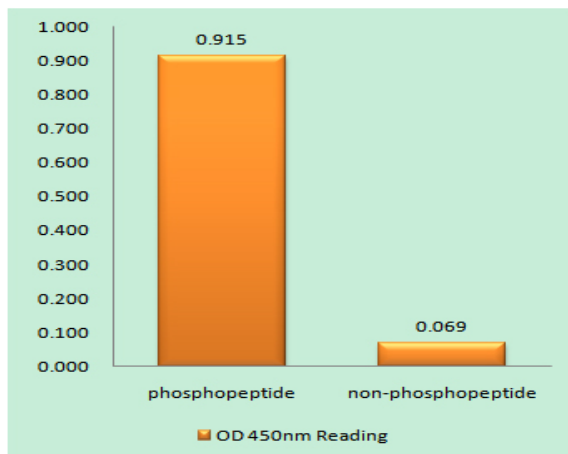
Cell Pathway : Arachidonic acid metabolism;

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],

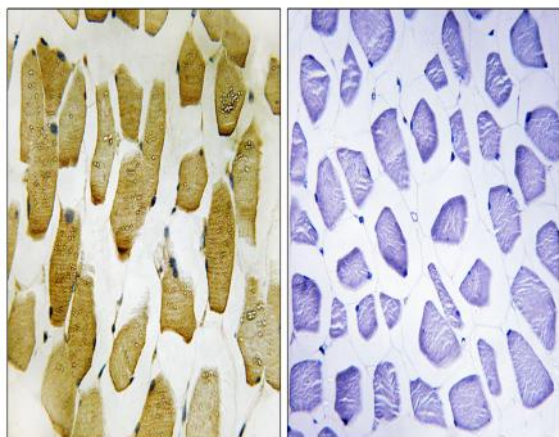
Function : catalytic activity:Arachidonate + O(2) = leukotriene A(4) + H(2)O.,cofactor: Binds 1 iron ion per subunit.,cofactor: Binds 2 calcium ions per subunit.,function: Catalyzes the first step in leukotriene biosynthesis, and thereby plays a role in inflammatory processes.,pathway: Lipid metabolism; 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.,subun

Subcellular Location : Cytoplasm . Nucleus matrix . Nucleus membrane ; Peripheral membrane protein . Cytoplasm, perinuclear region . Cytoplasm, cytosol . Nucleus envelope . Nucleus intermembrane space . Shuttles between cytoplasm and nucleus (PubMed:19233132). Found exclusively in the nucleus, when phosphorylated on Ser-272 (PubMed:18978352). Calcium binding promotes translocation from the cytosol and the nuclear matrix to the nuclear envelope and membrane association (PubMed:19233132, PubMed:3118366, PubMed:8245774, PubMed:16275640).

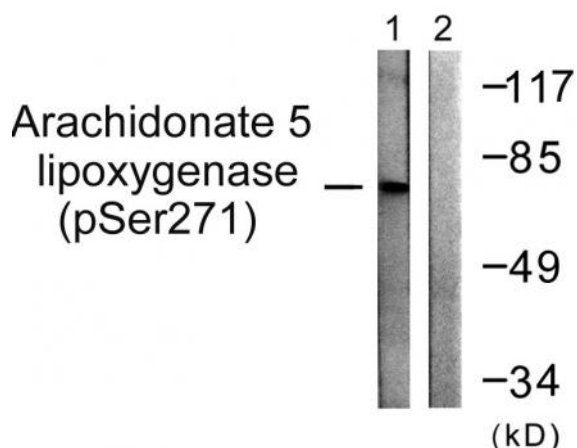
Products Images



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using Arachidonate 5 Lipoxygenase (Phospho-Ser271) Antibody



Immunohistochemistry analysis of paraffin-embedded human skeletal muscle, using Arachidonate 5 Lipoxygenase (Phospho-Ser271) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from HUVEC cells, using Arachidonate 5 Lipoxygenase (Phospho-Ser271) Antibody. The lane on the right is blocked with the phospho peptide.