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ALOX15B Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9200b

Product Information

Application	WB, IHC-P, E
Primary Accession	O15296
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB17162
Calculated MW	75857
Antigen Region	597-627

Additional Information

Gene ID	247
Other Names	Arachidonate 15-lipoxygenase B, 15-LOX-B, 15-lipoxygenase 2, 15-LOX-2, Arachidonate 15-lipoxygenase type II, Linoleate 13-lipoxygenase 15-LOb, 11311-, ALOX15B
Target/Specificity	This ALOX15B antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 597-627 amino acids from the C-terminal region of human ALOX15B.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ALOX15B Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ALOX15B (HGNC:434)
Function	[Isoform A]: Non-heme iron-containing dioxygenase that catalyzes the stereo-specific peroxidation of free and esterified polyunsaturated fatty acids

	(PUFAs) generating a spectrum of bioactive lipid mediators (Probable) (PubMed:10542053, PubMed:10625675, PubMed:12704195, PubMed:17493578, PubMed:18311922, PubMed:24282679, PubMed:24497644, PubMed:32404334, PubMed:9177185). It inserts peroxyl groups at C15 of arachidonate ((5Z,8Z,11Z,14Z)-eicosatetraenoate) producing (15S)-hydroperoxyeicosatetraenoate/(15S)-HPETE (Probable) (PubMed:10625675, PubMed:11956198, PubMed:12704195, PubMed:17493578, PubMed:24282679, PubMed:24497644, PubMed:9177185). Also peroxidizes linoleate ((9Z,12Z)-octadecadienoate) to 13- hydroperoxyoctadecadienoate/13-HPODE (Probable) (PubMed:10542053, PubMed:27435673). Oxygenates arachidonyl derivatives such as 2-arachidonoylglycerol (2-AG) leading to the production and extracellular release of 15-hydroxyeicosatetraenoyl glycerol (15-HETE-G) that acts as a peroxisome proliferator-activated receptor alpha agonist (PubMed:11956198, PubMed:17493578, PubMed:18311922). Has the ability to efficiently class-switch ALOX5 pro-inflammatory mediators into anti- inflammatory intermediates (PubMed:27145229). Participates in the sequential oxidations of DHA ((4Z,7Z,10Z,13Z,16Z,19Z)-docosahexaenoate) to generate specialized pro-resolving mediators (SPMs) resolvin D5 ((7S,17S)-diHPDHA), which can actively down-regulate the immune response and have anti-aggregation properties with platelets (PubMed:32404334). In addition to free PUFAs hydrolyzed from phospholipids, it directly oxidizes PUFAs esterified to membrane-bound phospholipids (PubMed:27435673). Has no detectable 8S-lipoxygenase activity on arachidonate but reacts with (8S)-HPETE to produce (8S,15S)-diHPETE (Probable). May regulate progression through the cell cycle and cell proliferation (PubMed:11839751, PubMed:12704195). May also regulate cytokine secretion by macrophages and therefore play a role in the immune response (PubMed:18067895). May also regulate macrophage differentiation into proatherogenic foam cells (PubMed:22912809).
Cellular Location	[Isoform A]: Nucleus. Note=Other isoforms are excluded from the nucleus.
Tissue Location	Expressed in hair, prostate, lung, ovary, lymph node, spinal cord and cornea.

Background

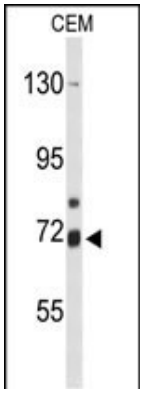
ALOX15B encodes a member of the lipoxygenase family of structurally related nonheme iron dioxygenases involved in the production of fatty acid hydroperoxides. The encoded protein converts arachidonic acid exclusively to 15S-hydroperoxyeicosatetraenoic acid, while metabolizing linoleic acid less effectively. This gene is located in a cluster of related genes and a pseudogene that spans approximately 100 kilobases on the short arm of chromosome 17.

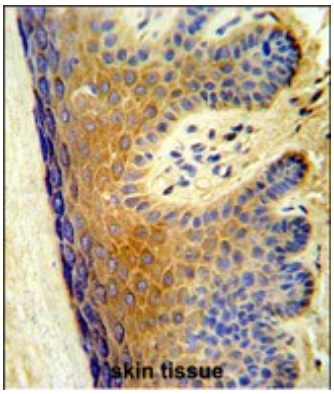
References

Wecksler,A.T., et.al., Biochemistry 48 (36), 8721-8730 (2009)
Kawakami,Y., et.al, Biosci. Biotechnol. Biochem. 73 (8), 1811-1817 (2009)

Images

Western blot analysis of ALOX15B Antibody (C-term) (Cat. #AP9200b) in CEM cell line lysates (35ug/lane). ALOX15B (arrow) was detected using the purified Pab.





Formalin-fixed and paraffin-embedded human skin tissue reacted with PSMD13 Antibody (C-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.