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ALOX12 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8877B

Product Information

Application	WB, IHC-P, IF, FC, E
Primary Accession	P18054
Reactivity	Human, Mouse, Rat
Predicted	Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB17150
Calculated MW	75694
Antigen Region	618-650

Additional Information

Gene ID	239
Other Names	Arachidonate 12-lipoxygenase, 12S-type, 12S-LOX, 12S-lipoxygenase, Lipoxin synthase 12-LO, 332-, Platelet-type lipoxygenase 12, ALOX12, 12LO, LOG12
Target/Specificity	This ALOX12 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 618-650 amino acids from the C-terminal region of human ALOX12.
Dilution	WB~~1:1000 IHC-P~~1:100~500 IF~~1:10~50 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
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	ALOX12 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ALOX12 (HGNC:429)
Synonyms	12LO, LOG12

Function	Catalyzes the regio and stereo-specific incorporation of molecular oxygen into free and esterified polyunsaturated fatty acids generating lipid hydroperoxides that can be further reduced to the corresponding hydroxy species (PubMed:17493578, PubMed:18311922, PubMed:1851637, PubMed:32404334, PubMed:8319693, PubMed:8500694). Mainly converts arachidonate ((5Z,8Z,11Z,14Z)-eicosatetraenoate) to the specific bioactive lipid (12S)-hydroperoxyeicosatetraenoate/(12S)-HPETE (PubMed:17493578, PubMed:22984144, PubMed:24282679, PubMed:8319693, PubMed:8500694). Through the production of bioactive lipids like (12S)- HPETE it regulates different biological processes including platelet activation (PubMed:8319693, PubMed:8500694). It can also catalyze the epoxidation of double bonds of polyunsaturated fatty acids such as (14S)-hydroperoxy-docosahexaenoate/(14S)-HPDHA resulting in the formation of (13S,14S)-epoxy-DHA (PubMed:23504711). Furthermore, it may participate in the sequential oxidations of DHA ((4Z,7Z,10Z,13Z,16Z,19Z)-docosahexaenoate) to generate specialized pro-resolving mediators (SPMs) like resolvin D5 ((7S,17S)-diHPDHA) and (7S,14S)-diHPDHA, that actively down-regulate the immune response and have anti-aggregation properties with platelets (PubMed:32404334). An additional function involves a multistep process by which it transforms leukotriene A4/LTA4 into the bioactive lipids lipoxin A4/LXA4 and lipoxin B4/LXB4, both are vasoactive and LXA4 may regulate neutrophil function via occupancy of specific recognition sites (PubMed:8250832). Can also peroxidize linoleate ((9Z,12Z)-octadecadienoate) to (13S)-hydroperoxyoctadecadienoate/ (13S-HPODE) (By similarity). Due to its role in regulating both the expression of the vascular endothelial growth factor (VEGF, an angiogenic factor involved in the survival and metastasis of solid tumors) and the expression of integrin beta-1 (known to affect tumor cell migration and proliferation), it can be regarded as protumorigenic (PubMed:16638750, PubMed:22237009, PubMed:9751607). Important for cell survival, as it may play a role not only in proliferation but also in the prevention of apoptosis in vascular smooth muscle cells (PubMed:23578768).
Cellular Location	Cytoplasm, cytosol. Membrane. Note=Membrane association is stimulated by EGF
Tissue Location	Expressed in vascular smooth muscle cells.

Background

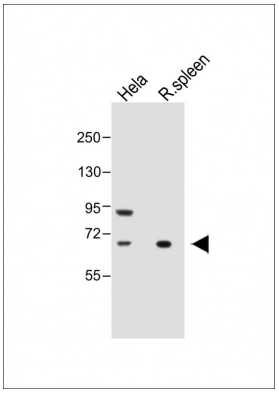
Oxygenase and 14,15-leukotriene A4 synthase activity.

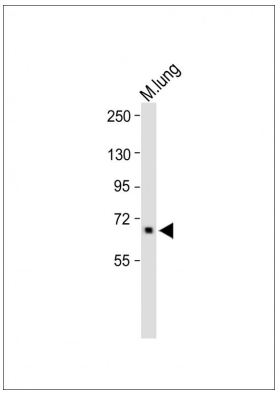
References

Yoshimoto,T., et.al., Biochem. Biophys. Res. Commun. 172 (3), 1230-1235 (1990)

Images

All lanes : Anti-ALOX12 Antibody (C-term) at 1:1000 dilution Lane 1: Hela whole cell lysate Lane 2: Rat spleen whole tissue lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 76 kDa Blocking/Dilution buffer: 5% NFDM/TBST.





Anti-ALOX12 Antibody (C-term) at 1:2000 dilution + Mouse lung whole tissue lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 76 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- SBFI26 induces triple-negative breast cancer cells ferroptosis via lipid peroxidation
- Lipoxygenase-mediated generation of lipid peroxides enhances ferroptosis induced by erastin and RSL3.

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