

LOX12 Antibody
Rabbit mAb
Catalog # AP92433

Specification

LOX12 Antibody - Product Information

Application	WB
Primary Accession	P18054
Reactivity	Rat
Clonality	Monoclonal
Other Names	
12 LOX; 12LO; 12S LOX; 12S-lipoxygenase; 12S-LOX; Alox12; LOG12; P-12LO;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	75694 Da

LOX12 Antibody - Additional Information

Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human LOX12
Description	Oxygenase and 14,15-leukotriene A4 synthase activity.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

LOX12 Antibody - 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](http://www.uniprot.org/citations/17493578), PubMed: [18311922](http://www.uniprot.org/citations/18311922), PubMed: [1851637](http://www.uniprot.org/citations/1851637), PubMed: [32404334](http://www.uniprot.org/citations/32404334), PubMed: [8319693](http://www.uniprot.org/citations/8319693), PubMed: [8500694](http://www.uniprot.org/citations/8500694)). Mainly converts arachidonate ((5Z,8Z,11Z,14Z)-eicosatetraenoate) to the specific bioactive lipid (12S)-hydroperoxyeicosatetraenoate/(12S)-HPETE (PubMed: [17493578](http://www.uniprot.org/citations/17493578), PubMed: [17493578](#)).

<http://www.uniprot.org/citations/22984144> target="_blank">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.

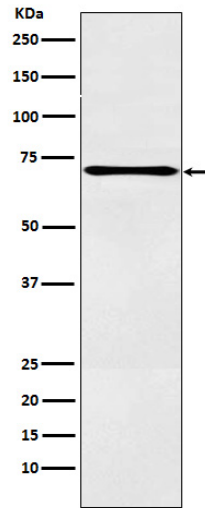
LOX12 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

LOX12 Antibody - Images





Western blot analysis of LOX12 expression in A431 cell lysate.