10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-LOX12 Rabbit Monoclonal Antibody

Catalog # ABO15852

Product Information

Application	WB
Primary Accession	P18054
Host	Rabbit
Isotype	IgG
Reactivity	Rat, Human
Clonality	Monoclonal
Format	Liquid
Description	Anti-LOX12 Rabbit Monoclonal Antibody . Tested in WB application. This antibody reacts with Human, Rat.

Additional Information

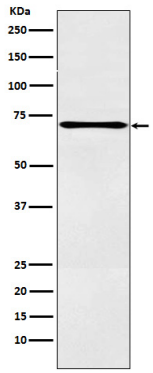
Gene ID	239
Other Names	Polyunsaturated fatty acid lipoxygenase ALOX12, 1.13.11.-, Arachidonate (12S)-lipoxygenase, 12S-LOX, 12S-lipoxygenase, 1.13.11.31, Arachidonate (15S)-lipoxygenase, 1.13.11.33, Linoleate (13S)-lipoxygenase, Lipoxin synthase 12-LO, 3.3.2.-, Platelet-type lipoxygenase 12, ALOX12 (HGNC:429), 12LO, LOG12
Calculated MW	75694
Application Details	WB 1:500-1:2000
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: 24A29
Immunogen	A synthesized peptide derived from human LOX12
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

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.

Images



Western blot analysis of LOX12 expression in A431 cell lysate.

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