

**ALOX12 Antibody (C-term)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP8877B**

**Specification**

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**ALOX12 Antibody (C-term) - Product Information**

|                   |                        |
|-------------------|------------------------|
| Application       | IF, WB, IHC-P, FC,E    |
| Primary Accession | <a href="#">P18054</a> |
| Reactivity        | Human, Mouse, Rat      |
| Host              | Rabbit                 |
| Clonality         | Polyclonal             |
| Isotype           | Rabbit IgG             |
| Antigen Region    | 618-650                |

**ALOX12 Antibody (C-term) - 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**

IF~~1:100  
WB~~1:1000  
IHC-P~~1:10~50  
FC~~1:10~50

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. 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.

**ALOX12 Antibody (C-term) - 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

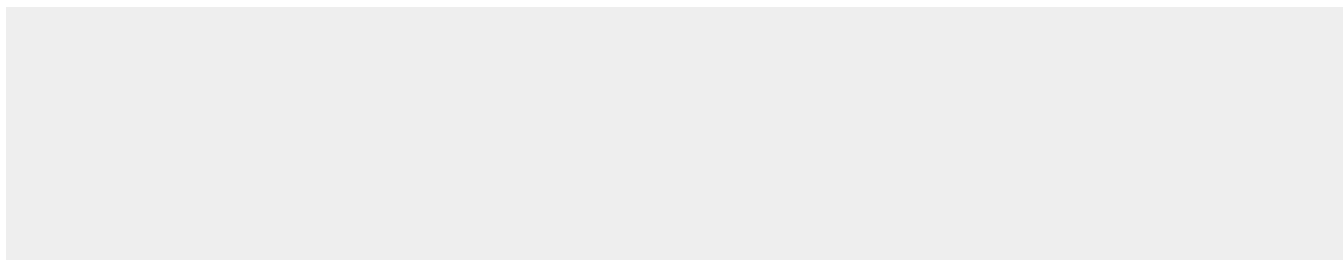
Expressed in vascular smooth muscle cells.

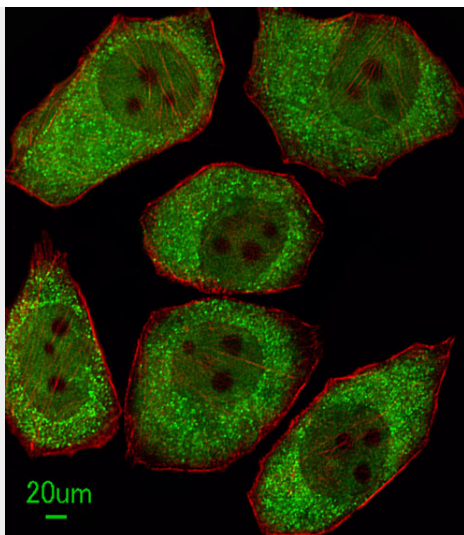
## ALOX12 Antibody (C-term) - Protocols

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

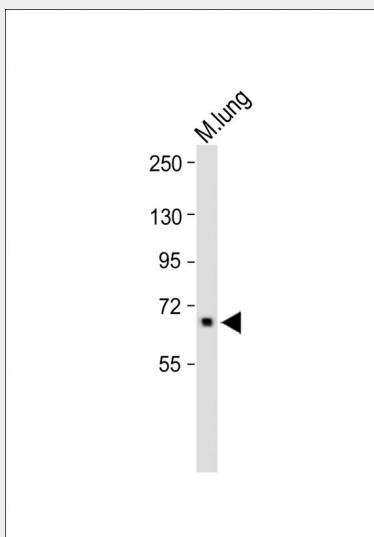
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## ALOX12 Antibody (C-term) - Images

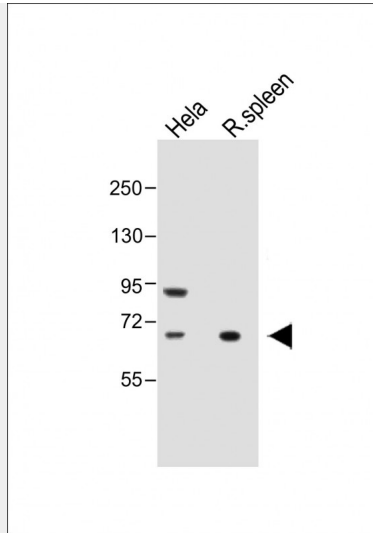




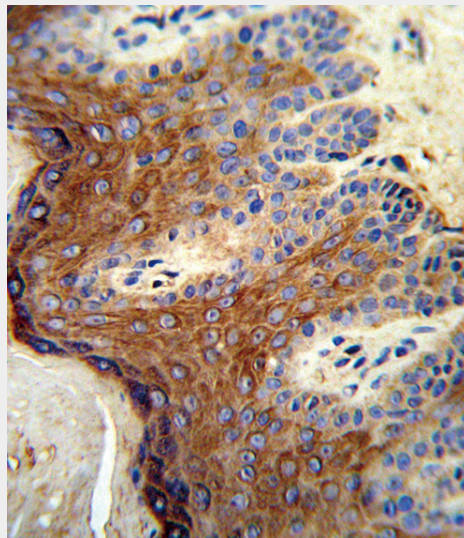
Immunofluorescent analysis of A549 cells, using ALOX12 Antibody (C-term) (Cat. #AP8877b). AP8877b was diluted at 1:100 dilution. Alexa Fluor 488-conjugated goat anti-rabbit IgG at 1:400 dilution was used as the secondary antibody (green). Cytoplasmic actin was counterstained with Dylight Fluor® 554 (red) conjugated Phalloidin (red).



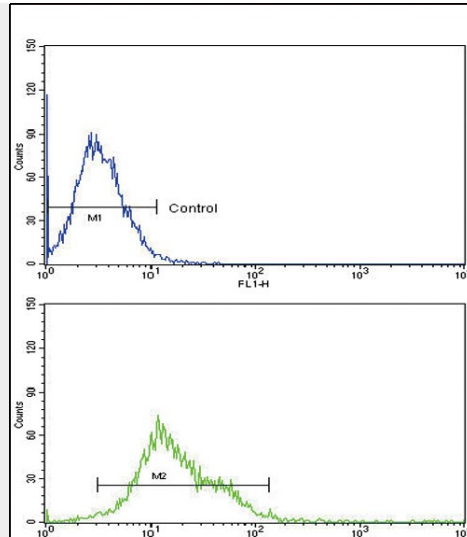
Anti-ALOX12 Antibody (C-term) at 1:2000 dilution + Mouse lung whole tissue lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 76 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



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  $\mu$ g per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 76 kDa Blocking/Dilution buffer: 5% NFDN/TBST.



Formalin-fixed and paraffin-embedded human skin tissue reacted with ALOX12 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.



ALOX12 Antibody (C-term) (Cat. #AP8877b) flow cytometric analysis of k562 cells (bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

#### **ALOX12 Antibody (C-term) - Background**

Oxygenase and 14,15-leukotriene A4 synthase activity.

#### **ALOX12 Antibody (C-term) - References**

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

#### **ALOX12 Antibody (C-term) - 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.](#)