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

ALOXE3 Antibody (Center)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP10450C

Specification

ALOXE3 Antibody (Center) - Product Information

Application	**WB, IHC-P-Leica,E**
Primary Accession	Q9BYJ1
Other Accession	NP_067641.2, NP_001159432.1
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**223-252**

ALOXE3 Antibody (Center) - Additional Information

Gene ID 59344

Other Names
Hydroperoxide isomerase ALOXE3, Epidermis-type lipoxygenase 3, Epidermal LOX-3, e-LOX-3, eLOX-3, Hydroperoxy icosatetraenoate dehydratase, ALOXE3

Target/Specificity
This ALOXE3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 223-252 amino acids from the Central region of human ALOXE3.

Dilution
WB~~1:1000
IHC-P-Leica~~1:500

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
ALOXE3 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

ALOXE3 Antibody (Center) - Protein Information

Name ALOXE3 (HGNC:13743)

Function Non-heme iron-containing lipoxygenase which is atypical in that it displays a prominent

hydroperoxide isomerase activity and a reduced lipoxygenases activity (PubMed:12881489, PubMed:17045234, PubMed:20921226, PubMed:20923767). The hydroperoxide isomerase activity catalyzes the isomerization of hydroperoxides, derived from arachidonic and linoleic acid by ALOX12B, into hepoxilin-type epoxyalcohols and ketones (PubMed:12881489, PubMed:17045234, PubMed:20923767). In presence of oxygen, oxygenates polyunsaturated fatty acids, including arachidonic acid, to produce fatty acid hydroperoxides (PubMed:20921226). In the skin, acts downstream of ALOX12B on the linoleate moiety of esterified omega-hydroxyacyl-sphingosine (EOS) ceramides to produce an epoxy-ketone derivative, a crucial step in the conjugation of omega-hydroxyceramide to membrane proteins (PubMed:21558561). Therefore plays a crucial role in the synthesis of corneocytes lipid envelope and the establishment of the skin barrier to water loss (PubMed:21558561). In parallel, it may have a signaling function in barrier formation through the production of hepoxilins metabolites (PubMed:21558561). Also plays a role in adipocyte differentiation through hepoxilin A3 and hepoxilin B3 production which in turn activate PPARG (By similarity). Through the production of hepoxilins in the spinal cord, it may regulate inflammatory tactile allodynia (By similarity).

Cellular Location
Cytoplasm {ECO:0000255|PROSITE-ProRule:PRU00726}.

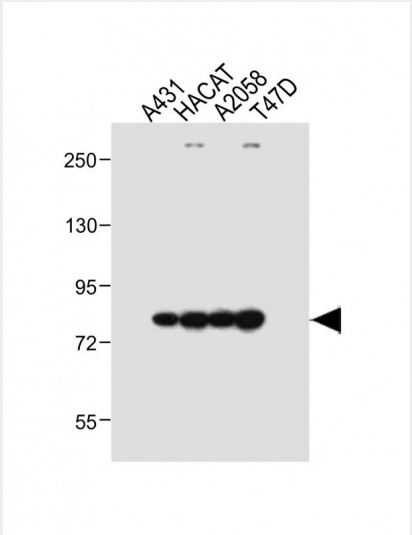
Tissue Location
Predominantly expressed in skin.

ALOXE3 Antibody (Center) - Protocols

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

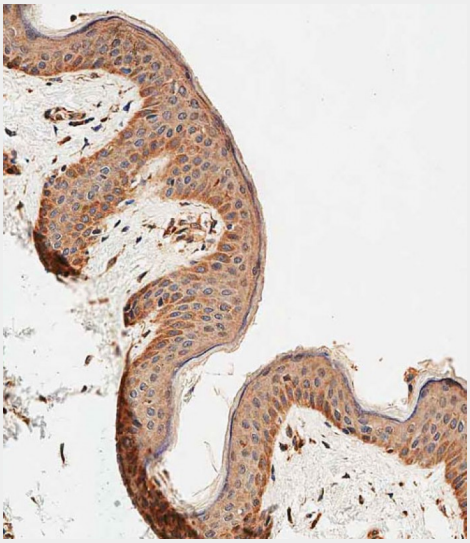
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

ALOXE3 Antibody (Center) - Images

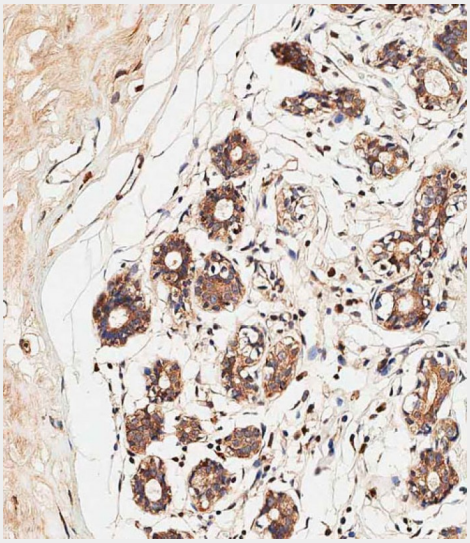


10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

All lanes : Anti-ALOXE3 Antibody (Center) at 1:1000 dilution Lane 1: A431 whole cell lysate Lane 2: HACAT whole cell lysate Lane 3: A2058 whole cell lysate Lane 4: T47D whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 81 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Immunohistochemical analysis of paraffin-embedded human skin tissue using AP10450C performed on the Leica® BOND RXm. Tissue was fixed with formaldehyde at room temperature, antigen retrieval was by heat mediation with a EDTA buffer (pH9. 0). Samples were incubated with primary antibody(1:500) for 1 hours at room temperature. A undiluted biotinylated CRF Anti-Polyvalent HRP Polymer antibody was used as the secondary antibody.



Immunohistochemical analysis of paraffin-embedded human breast tissue using AP10450C performed on the Leica® BOND RXm. Tissue was fixed with formaldehyde at room temperature, antigen retrieval was by heat mediation with a EDTA buffer (pH9. 0). Samples were incubated with primary antibody(1:500) for 1 hours at room temperature. A undiluted biotinylated CRF Anti-Polyvalent HRP Polymer antibody was used as the secondary antibody.

ALOXE3 Antibody (Center) - Background

ALOXE3 is a member of the lipoxygenase family, which are catabolized by arachidonic acid-derived compounds. The encoded enzyme is a hydroperoxide isomerase that synthesizes a unique type of epoxy alcohol (8R-hydroxy-11R,12R-epoxyeicosa-5Z,9E,14Z-trienoic

acid) from 12R-hydroperoxyeicosatetraenoic acid (12R-HPETE). This epoxy alcohol can activate the the nuclear receptor peroxisome proliferator-activated receptor alpha (PPARalpha), which is implicated in epidermal differentiation. Loss of function of the enzyme encoded by this gene results in ichthyosis, implicating the function of this gene in the differentiation of human skin.

ALOXE3 Antibody (Center) - References

Han, S., et al. Hum. Immunol. 71(7):727-730(2010)
Rajaraman, P., et al. Cancer Epidemiol. Biomarkers Prev. 19(5):1356-1361(2010)
Vahlquist, A., et al. J. Invest. Dermatol. 130(2):438-443(2010)
Rajaraman, P., et al. Cancer Epidemiol. Biomarkers Prev. 18(5):1651-1658(2009)
Yu, Z., et al. Lipids 42(6):491-497(2007)