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ALOXE3 Rabbit pAb

Catalog # AP97806

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	Q9BYJ1
Other Accession	Q9BYJ1
Predicted	Rat, Pig, Human, Mouse, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	80543
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human ALOXE3
Epitope Specificity	141-240/711
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the lipoxygenase family. Contains 1 lipoxygenase domain. Contains 1 PLAT domain.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Introduces molecular oxygen into polyunsaturated fatty acids. Exact substrate is not known. Tissue specificity:Predominantly expressed in skin. Involvement in diseaseDefects in ALOXE3 are a cause of non-bullous congenital ichthyosiform erythroderma (NCIE). NCIE is a non-bullous ichthyosis, a skin disorder characterized by abnormal cornification of the epidermis. Most affected individuals are born with a tight, shiny, translucent covering called collodion membrane. The collodion membrane subsequently evolves into generalized scaling and intense redness of the skin. Clinical features are milder than in lamellar ichthyoses and demonstrate a greater variability in the intensity of erythema, size and type of scales. In contrast to lamellar ichthyoses, scales are usually white, fine and powdery, and palms and soles are severely affected. Patients suffer from palmoplantar keratoderma, often with painful fissures, digital contractures, and loss of pulp volume.

Additional Information

Gene ID	59344
Other Names	ARCI3; E-LOX; LI5; eLOX-3; eLOX3; e-LOX-3; LOXE3_HUMAN; ALOXE3; Epidermis-type lipoxygenase 3 (Epidermal LOX-3 | e-LOX-3 | eLOX-3); Hydroperoxy dehydratase ALOXE3; Hydroperoxy icosatetraenoate dehydratase; Hydroperoxy icosatetraenoate isomerase; LOXE3_MOUSE; arachidonate epidermal lipoxygenase 3; arachidonate lipoxygenase 3; Epidermal lipoxygenase-3; hydroperoxide isomerase
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000

Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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.

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