



Leukocyte-type 12-LO (I-17): sc-27364

BACKGROUND

Lipoxygenases are a family of enzymes that dioxygenate unsaturated fatty acids, thus initiating lipoperoxidation of membranes, the synthesis of signalling molecules as well as inducing structural and metabolic changes in the cell. The Lox enzymes in mammals, 12-LO and 15-LO, are classified with respect to their positional specificity of the deoxygenation of their most common substrate, arachidonic acid. The metabolism of arachidonic acid leads to the generation of biologically active metabolites that have been implicated in cell growth and proliferation, as well as survival and apoptosis. Leukocyte-type 12-LO is a 663 amino acid lipoxygenase that is found in leukocytes, aorta, kidney, small intestine and the pineal and pituitary glands. Leukocyte-type 12-LO binds one iron ion per subunit and contains one lipoxygenase domain and one PLAT domain.

REFERENCES

1. Fletcher-Cieutat, M., et al. 1985. Aspirin enhances the sensitivity of human platelet 12-lipoxygenase to inhibition by 15-HETE, an endogenous regulator. *Prostaglandins Leukot. Med.* 18: 255-259.
2. Freire-Moar, J., et al. 1995. Cloning and characterization of a murine macrophage lipoxygenase. *Biochim. Biophys. Acta* 1254: 112-116.
3. Pidgeon G.P., et al. 2003. Overexpression of platelet-type 12-lipoxygenase promotes tumor cell survival by enhancing $\alpha_v b_3$ and $\alpha_v b_5$ Integrin expression. *Cancer Research* 63: 4258-4267.
4. Liu, C., et al. 2004. Transcriptional regulation of 15-lipoxygenase expression by promoter methylation. *Exp. Cell Research* 297: 61-67.
5. Kelavkar, U.P., et al. 2004. 15-lipoxygenase-1 expression upregulates and activates Insulin-like growth factor-1 receptor in prostate cancer cells. *Neoplasia* 6: 41-52.
6. Raso E., et al. 2004. Molecular identification, localization and function of platelet-type 12-lipoxygenase in human melanoma progression, under experimental and clinical conditions. *Melanoma Research* 14: 245-250.

CHROMOSOMAL LOCATION

Genetic locus: Alox15 (mouse) mapping to 11 B3.

SOURCE

Leukocyte-type 12-LO (I-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Leukocyte-type 12-lipoxygenase of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-27364 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Leukocyte-type 12-LO (I-17) is recommended for detection of Leukocyte-type 12-lipoxygenase of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Leukocyte-type 12-LO siRNA (m): sc-146714, Leukocyte-type 12-LO shRNA Plasmid (m): sc-146714-SH and Leukocyte-type 12-LO shRNA (m) Lentiviral Particles: sc-146714-V.

Molecular Weight of Leukocyte-type 12-LO: 75 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.