

# LOXHD1 (G-20): sc-85038

## BACKGROUND

Lipoxygenases are a family of enzymes which dioxygenate unsaturated fatty acids, thus initiating lipoperoxidation of membranes, the synthesis of signaling molecules, as well as inducing structural and metabolic changes in the cell. The LOX enzymes in mammals include 12-LO and 15-LO, which are classified with respect to their positional specificity of the deoxygenation of their most common substrate, arachidonic acid. The 12-LO pathway is a regulator of cell survival and apoptosis and also affects the expression and localization of the Integrin  $\alpha$ V/ $\beta$ 5 and actin microfilaments in rat Walker 256 carcinosarcoma cells. 15-LO acts in physiological membrane remodeling and the pathogenesis of atherosclerosis, inflammation, and carcinogenesis. Related to the LOX enzymes, LOXHD1 (lipoxygenase homology domain-containing protein 1) is a 1,947 amino acid protein that contains 14 PLAT domains. There are five isoforms of LOXHD1 that are produced as a result of alternative splicing events.

## 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. Pidgeon G.P., et al. 2003. Overexpression of platelet-type 12-lipoxygenase promotes tumor cell survival by enhancing  $\alpha$ v $\beta$ 3 and  $\alpha$ v $\beta$ 5 integrin expression. *Cancer Res.* 63: 4258-4267.
3. Liu, C., et al. 2004. Transcriptional regulation of 15-lipoxygenase expression by promoter methylation. *Exp. Cell Res.* 297: 61-67.
4. 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.

## CHROMOSOMAL LOCATION

Genetic locus: LOXHD1 (human) mapping to 18q21.1.

## SOURCE

LOXHD1 (G-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of LOXHD1 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-85038 P, (100  $\mu$ 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

LOXHD1 (G-20) is recommended for detection of LOXHD1 of human and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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).

LOXHD1 (G-20) is also recommended for detection of LOXHD1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for LOXHD1 siRNA (h): sc-75687, LOXHD1 shRNA Plasmid (h): sc-75687-SH and LOXHD1 shRNA (h) Lentiviral Particles: sc-75687-V.

Molecular Weight (predicted) of LOXHD1 isoforms 1/2: 222/175 kDa.

Molecular Weight (predicted) of LOXHD1 isoforms 3/4/5: 127/53/59 kDa.

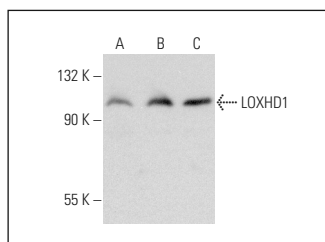
Molecular Weight (observed) of LOXHD1: 150 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, Jurkat whole cell lysate: sc-2204 or K-562 whole cell lysate: sc-2203.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



LOXHD1 (G-20): sc-85038. Western blot analysis of LOXHD1 expression in IMR-32 (A), Jurkat (B) and K-562 (C) whole cell lysates.

## RESEARCH USE

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