SANTA CRUZ BIOTECHNOLOGY, INC.

15-LO (H-235): sc-32940



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, 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. 15-Lipoxygenase acts in physiological membrane remodeling and the pathogenesis of atherosclerosis, inflammation, and carcinogenesis. It is highly regulated and expressed in a tissue- and cell-type-specific fashion. IL-4 and IL-13 play important roles in transactivating the 15-LO gene. Overexpression of 15-LO type 1 in prostate cancer contributes to the cancer progression by regulating IGF-1R expression and activation.

CHROMOSOMAL LOCATION

Genetic locus: ALOX15 (human) mapping to 17p13.2; Alox15 (mouse) mapping to 11 B3.

SOURCE

15-L0 (H-235) is a rabbit polyclonal antibody raised against amino acids 428-662 mapping at the C-terminus of 15-L0 of human origin.

PRODUCT

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

STORAGE

Store at 4° C, **D0 NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

APPLICATIONS

15-L0 (H-235) is recommended for detection of 15-lipoxygenase and leukocyte-, platelet-, and epidermal-type 12-lipoxygenases of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

15-L0 (H-235) is also recommended for detection of 15-lipoxygenase and leukocyte-, platelet-, and epidermal-type 12-lipoxygenases in additional species, including canine, bovine and porcine.

Molecular Weight of 15-LO: 75 kDa.

Positive Controls: Leukocyte-type 12-L0 (m): 293T Lysate: sc-125542, HeLa nuclear extract: sc-2120 or KNRK whole cell lysate: sc-2214.

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. 4) Immuno-histochemistry: use ImmunoCruz[™]: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA





of formalin fixed, paraffin-embedded human urinary

bladder tissue showing cytoplasmic staining of

squamous epithelial cells

15-L0 (H-235): sc-32940. Western blot analysis of Leukocyte-type 12-L0 expression in non-transfected: sc-117752 (**A**) and mouse Leukocyte-type 12-L0 transfected: sc-125542 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

 Pfister, S., et al. 2011. Mechanisms underlying increased reactivity of pulmonary arteries contralateral to a localized high-flow anastomosis. J. Thorac. Cardiovasc. Surg. 141: 425-431.

PROTOCOLS

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

MONOS Satisfation Guaranteed

Try **15-LO (B-7): sc-133085**, our highly recommended monoclonal alternative to 15-LO (H-235).