

15-LO2 (K-20): sc-46050

BACKGROUND

Lipoxygenases are a family of enzymes which 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. 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. 15-lipoxygenase, type II (15-LO2) is important for the conversion of arachidonic acid to 15S-hydroperoxyeicosatetraenoic acid. It is a cytoplasmic protein expressed primarily in cornea, lung, hair and prostate.

CHROMOSOMAL LOCATION

Genetic locus: ALOX15B (human) mapping to 17p13.1; Alox8 (mouse) mapping to 11 B3.

SOURCE

15-LO2 (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of 15-LO2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-46050 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

15-LO2 (K-20) is recommended for detection of 15-LO2 splice variants a and c of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

15-LO2 (K-20) is also recommended for detection of 15-LO2 splice variants a and c in additional species, including equine.

Suitable for use as control antibody for 15-LO2 siRNA (h): sc-45626, 15-LO2 siRNA (m): sc-45627, 15-LO2 shRNA Plasmid (h): sc-45626-SH, 15-LO2 shRNA Plasmid (m): sc-45627-SH, 15-LO2 shRNA (h) Lentiviral Particles: sc-45626-V and 15-LO2 shRNA (m) Lentiviral Particles: sc-45627-V.

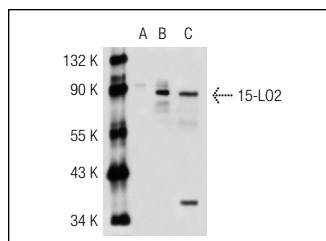
Molecular Weight of 15-LO2: 75 kDa.

Positive Controls: 15-LO2 (h): 293T Lysate: sc-113863 or HeLa whole cell lysate: sc-2200.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



15-LO2 (K-20): sc-46050. Western blot analysis of 15-LO2 expression in non-transfected 293T: sc-117752 (A), human 15-LO2 transfected 293T: sc-113863 (B) and HeLa (C) whole cell lysates.

STORAGE

Store at 4° C, **DO 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.

PROTOCOLS

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

MONOS
Satisfaction
Guaranteed

Try **15-LO2 (D-9): sc-271290** or **15-LO2 (F-10): sc-376795**, our highly recommended monoclonal alternatives to 15-LO2 (K-20).