SANTA CRUZ BIOTECHNOLOGY, INC.

15-LO2 (h4): 293T Lysate: sc-158186

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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-LO 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-LO, 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.

REFERENCES

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4. Lutteke, T., et al. 2003. LOX-DB—database on lipoxygenases. Bioinformatics 19: 2482-2483.
5. Pidgeon, G.P., et al. 2003. Overexpression of platelet-type 12-LO promotes tumor cell survival by enhancing $\alpha v\beta 3$ and $\alpha v\beta 5$ Integrin expression. Cancer Res. 63: 4258-4267.
6. Liu C., et al. 2004. Transcriptional regulation of 15-LO expression by promoter methylation. Exp. Cell Res. 297: 61-67.
7. Kelavkar U.P., et al. 2004. 15-LO1 expression upregulates and activates Insulin-like growth factor-1 receptor in prostate cancer cells. Neoplasia 6: 41-52.
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CHROMOSOMAL LOCATION

Genetic locus: ALOX15B (human) mapping to 17p13.1.

PRODUCT

15-LO2 (h4): 293T Lysate represents a lysate of human 15-LO2 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

15-LO2 (h4): 293T Lysate is suitable as a Western Blotting positive control for human reactive 15-LO2 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.