SANTA CRUZ BIOTECHNOLOGY, INC.

LOXL4 (B-6): sc-365822

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Lysyl oxidase (LOX) proteins belong to a family of enzymes that oxidize primary amine substrated to reactive aldehydes. In fibrillar collagens and elastin, LOX catalyzes the lysine-derived cross-links of collagen fibrils and insoluble elastic fibers within the extracellular matrix. It can localize both to the nucleus and the cytoplasm. LOX is involved in tumor suppression, cell motility, cellular senescence and developmental regulation. There are four homologs of LOX, lysyl oxidase-like proteins designated LOX-like (LOXL1-LOXL4) proteins. LOXL4 is an extracellular protein that is widely expressed. Highest expression levels have been detected in testis, pancreas, cartilage and skeletal muscle.

REFERENCES

1. Ito, H., et al. 2001. Molecular cloning and biological activity of a novel LOX-related gene expressed in cartilage. J. Biol. Chem. 276: 24023-24029.
2. Asuncion, L., et al. 2001. A novel human lysyl oxidase-like gene (LOXL4) on chromosome 10q24 has an altered scavenger receptor cysteine-rich domain. Matrix Biol. 20: 487-491.
3. Maki, J.M., et al. 2001. Cloning and characterization of a fifth human LOX isoenzyme: the third member of the LOX-related subfamily with four scavenger receptor cysteine-rich domains. Matrix Biol. 20: 493-496.
4. Kirschmann, D.A., et al. 2002. A molecular role for LOX in breast cancer invasion. Cancer Res. 62: 4478-4483.
5. Bronson, N.W., et al. 2005. LOXL null mice demonstrate selective dentate structural changes but maintain dentate granule cell and CA1 pyramidal cell potentiation in the hippocampus. Neurosci. Lett. 390: 118-122.
6. Kim, D.J., et al. 2008. Lysyl oxidase like 4, a novel target gene of TGFβ1 signaling, can negatively regulate TGFβ1-induced cell motility in PLC/PRF/5 hepatoma cells. Biochem. Biophys. Res. Commun. 373: 521-527.

CHROMOSOMAL LOCATION

Genetic locus: LOXL4 (human) mapping to 10q24.2; Loxl4 (mouse) mapping to 19 C3.

SOURCE

LOXL4 (B-6) is a mouse monoclonal antibody raised against amino acids 211-280 mapping within an internal region of LOXL4 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LOXL4 (B-6) is available conjugated to agarose (sc-365822 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365822 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365822 PE), fluorescein (sc-365822 FITC), Alexa Fluor® 488 (sc-365822 AF488), Alexa Fluor® 546 (sc-365822 AF546), Alexa Fluor® 594 (sc-365822 AF594) or Alexa Fluor® 647 (sc-365822 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365822 AF680) or Alexa Fluor® 790 (sc-365822 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

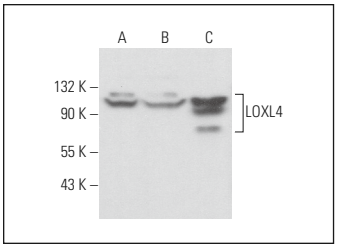
LOXL4 (B-6) is recommended for detection of LOXL4 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for LOXL4 siRNA (h): sc-45226, LOXL4 siRNA (m): sc-45227, LOXL4 shRNA Plasmid (h): sc-45226-SH, LOXL4 shRNA Plasmid (m): sc-45227-SH, LOXL4 shRNA (h) Lentiviral Particles: sc-45226-V and LOXL4 shRNA (m) Lentiviral Particles: sc-45227-V.

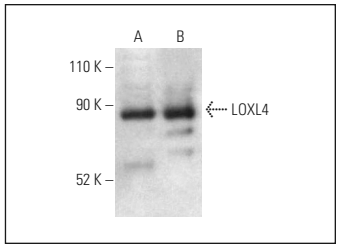
Molecular Weight of LOXL4: 84 kDa.

Positive Controls: c4 whole cell lysate: sc-364186, TF-1 cell lysate: sc-2412 or A-10 cell lysate: sc-3806.

DATA



LOXL4 (B-6): sc-365822. Western blot analysis of LOXL4 expression in TF-1 (**A**), HEL 92.1.7 (**B**) and A-10 (**C**) whole cell lysates.



LOXL4 (B-6) HRP: sc-365822 HRP. Direct western blot analysis of LOXL4 expression in A-375 (**A**) and c4 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Palmieri, V., et al. 2020. Neutrophils expressing lysyl oxidase-like 4 protein are present in colorectal cancer liver metastases resistant to anti-angiogenic therapy. J. Pathol. 251: 213-223.
2. Cui, Y., et al. 2023. Berberine regulates bone metabolism in apical periodontitis by remodelling the extracellular matrix. Oral Dis. 29: 1184-1196.
3. Zhang, X., et al. 2023. TRIM44 regulates tumor immunity in gastric cancer through LOXL2-dependent extracellular matrix remodeling. Cell. Oncol. 46: 423-435.

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 for detailed protocols and support products.