

# LOX (F-8): sc-373995

## BACKGROUND

The lysyl oxidase family of extracellular proteins includes LOX and four LOX-like enzymes, which are responsible for the deamination of peptidyl lysine residues of collagens and elastin. They also catalyze inter- and intra-crosslinking reactions. Overexpression of LOX may cause severe fibrotic degeneration due to its high resistance to degradative enzymes. Procollagen C-proteinase activity processes LOX from a precursor protein to a mature form. Activation of LOX occurs in normal developing and adult skin, and alterations in LOX expression and activity are associated with skin aging and senescence. LOX is crucial for development of the cardiovascular and respiratory systems. In addition, LOX plays a role in cancer, wound healing, as well as cell motility, chemotaxis and differentiation.

## REFERENCES

- Uzel, M.I., et al. 2001. Multiple bone morphogenetic protein 1-related mammalian metalloproteinases process pro-lysyl oxidase at the correct physiological site and control lysyl oxidase activation in mouse embryo fibroblast cultures. *J. Biol. Chem.* 276: 22537-22543.
- Palamakumbura, A.H., et al. 2004. The propeptide domain of lysyl oxidase induces phenotypic reversion of Ras-transformed cells. *J. Biol. Chem.* 279: 40593-40600.

## CHROMOSOMAL LOCATION

Genetic locus: LOX (human) mapping to 5q23.2; Lox (mouse) mapping to 18 D1.

## SOURCE

LOX (F-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 160-193 within an internal region of LOX of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LOX (F-8) is available conjugated to agarose (sc-373995 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373995 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373995 PE), fluorescein (sc-373995 FITC), Alexa Fluor® 488 (sc-373995 AF488), Alexa Fluor® 546 (sc-373995 AF546), Alexa Fluor® 594 (sc-373995 AF594) or Alexa Fluor® 647 (sc-373995 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-373995 AF680) or Alexa Fluor® 790 (sc-373995 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-373995 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## STORAGE

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

## APPLICATIONS

LOX (F-8) is recommended for detection of lysyl oxidase (LOX) 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), 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). LOX (F-8) is also recommended for detection of lysyl oxidase (LOX) in additional species, including canine and porcine.

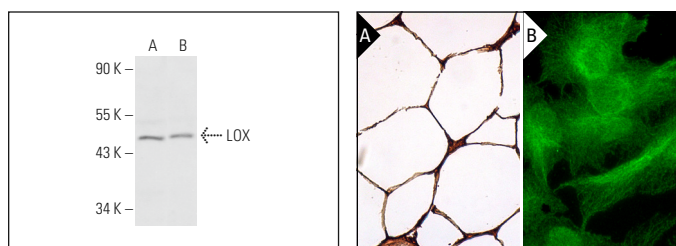
Suitable for use as control antibody for LOX siRNA (h): sc-45218, LOX siRNA (m): sc-45219, LOX siRNA (r): sc-156158, LOX shRNA Plasmid (h): sc-45218-SH, LOX shRNA Plasmid (m): sc-45219-SH, LOX shRNA Plasmid (r): sc-156158-SH, LOX shRNA (h) Lentiviral Particles: sc-45218-V, LOX shRNA (m) Lentiviral Particles: sc-45219-V and LOX shRNA (r) Lentiviral Particles: sc-156158-V.

Molecular Weight of LOX proenzyme: 50 kDa.

Molecular Weight of mature LOX: 30 kDa.

Positive Controls: WI-38 whole cell lysate: sc-364260, JEG-3 whole cell lysate: sc-364255 or MCF7 whole cell lysate: sc-2206.

## DATA



LOX (F-8): sc-373995. Western blot analysis of LOX expression in WI-38 (A) and MCF7 (B) whole cell lysates.

LOX (F-8): sc-373995. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adipose tissue showing cytoplasmic and membrane staining of adipocytes and connective tissue staining (A). Immunofluorescence staining of formalin-fixed Hep G2 cells showing cell surface localization (B).

## SELECT PRODUCT CITATIONS

- Yariswamy, M., et al. 2016. Cardiac-restricted overexpression of TRAF3 interacting protein 2 (TRAF3IP2) results in spontaneous development of myocardial hypertrophy, fibrosis, and dysfunction. *J. Biol. Chem.* 291: 19425-19436.
- Nguyen, N.H., et al. 2020. High glucose increases binding of lysyl oxidase to extracellular matrix proteins: implications for diabetic retinopathy. *Invest. Ophthalmol. Vis. Sci.* 61: 40.
- Liu, L., et al. 2021. Proliferation, migration and invasion of triple negative breast cancer cells are suppressed by berbamine via the PI3K/Akt/MDM2/p53 and PI3K/Akt/mTOR signaling pathways. *Oncol. Lett.* 21: 70.

## RESEARCH USE

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