abcam

Product datasheet

Anti-LOX antibody [EPR4025] ab174316

KO VALIDATED Recombinant RabMAb

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Overview

Product name	Anti-LOX antibody [EPR4025]
Description	Rabbit monoclonal [EPR4025] to LOX
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P, ICC/IF, IP, Flow Cyt (Intra)
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	HeLa, (HeLa (Human cervix adenocarcinoma epithelial cell) treated with 0.5 mM DFO for 24 hours whole cell lysates) Jurkat and WI-38 cell lysates. Human muscle tissue. HeLa cells. Immunoprecipitation pellet from WI-38 cells lysate. Immunocytochemistry: Human chondrocytes
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: 40% Glycerol, 59% PBS, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR4025
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab174316 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★☆ **(1)**	1/1000 - 1/10000. Predicted molecular weight: 47 kDa. **For unpurified, use 1/1000 - 1/2000.**
IHC-P		1/900. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. **For unpurified, use 1/300.** **IHC antigen retrieval protocols**.
ICC/IF	★★★★★ **(1)**	1/300. **For unpurified, use 1/100.**
IP		1/10 - 1/100.
Flow Cyt (Intra)		1/100. For unpurified, use 1/30. **ab172730** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Target

Function Responsible for the post-translational oxidative deamination of peptidyl lysine residues in precursors to fibrous collagen and elastin. In addition to cross-linking of extracellular matrix proteins, may have a direct role in tumor suppression.

Tissue specificity Heart, placenta, skeletal muscle, kidney, lung and pancreas.

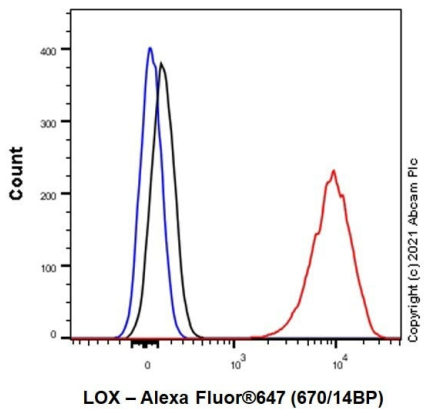
Involvement in disease Defects in LOX may be a cause of cutis laxa autosomal recessive type 1 (ARCL1) [MIM:219100].

Sequence similarities Belongs to the lysyl oxidase family.

Post-translational modifications The lysine tyrosylquinone cross-link (LTQ) is generated by condensation of the epsilon-amino group of a lysine with a topaquinone produced by oxidation of tyrosine.

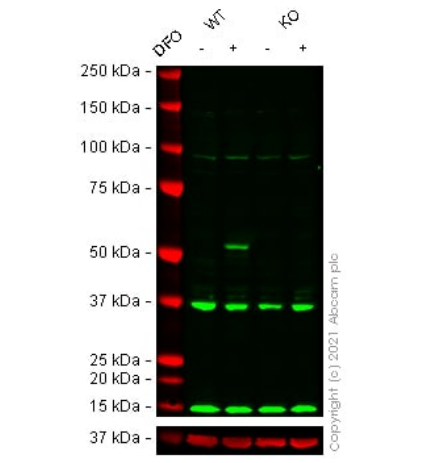
Cellular localization Secreted > extracellular space.

Images



Flow Cytometry (Intracellular) - Anti-LOX antibody [EPR4025] (ab174316)

Flow Cytometry (Intracellular) analysis of ab174316. HeLa (Human cervix adenocarcinoma epithelial cell) cells were fixed in 4% paraformaldehyde and permeabilized with 90% methanol. ab174316 was used at 1:100 dilution (1ug) (Red). Secondary antibody Goat anti rabbit IgG (Alexa Fluor® 647, **ab150083**) at 1:5000 dilution. Isotype control Rabbit monoclonal IgG (**ab172730**) (Black). Unlabelled control, cells without incubation with primary antibody and secondary antibody (Blue).



Western blot - Anti-LOX antibody [EPR4025] (ab174316)

All lanes : Anti-LOX antibody [EPR4025] (ab174316) at 1/1000 dilution

Lane 1 : Wild-type HeLa Vehicle Control DFO (0 mM, 24 h) cell lysate
Lane 2 : Wild-type HeLa Treated DFO (0.5 mM, 24 h) cell lysate
Lane 3 : LOX knockout HeLa Vehicle Control DFO (0 mM, 24 h) cell lysate
Lane 4 : LOX knockout HeLa Treated DFO (0.5 mM, 24 h) cell lysate

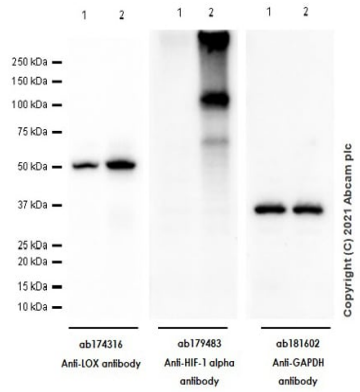
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 47 kDa
Observed band size: 52 kDa

False colour image of Western blot: Anti-LOX antibody [EPR4025] staining at 1/1000 dilution, shown in green; Mouse anti-GAPDH

antibody [6C5] (**ab8245**) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab174316 was shown to bind specifically to LOX. A band was observed at 52 kDa in wild-type HeLa cell lysates with no signal observed at this size in Lox knockout cell line **ab261801** (knockout cell lysate **ab256981**). To generate this image, wild-type and Lox knockout HeLa cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3% milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4°C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (**ab216776**) at 1/20000 dilution.



Western blot - Anti-LOX antibody [EPR4025] (ab174316)

All lanes :

Lane 1 : HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates
Lane 2 : HeLa (Human cervix adenocarcinoma epithelial cell) treated with 0.5 mM DFO for 24 hours whole cell lysates

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/10000 dilution

Predicted band size: 47 kDa
Observed band size: 50 kDa

Exposure time: 7 seconds

Primary antibody dilution:

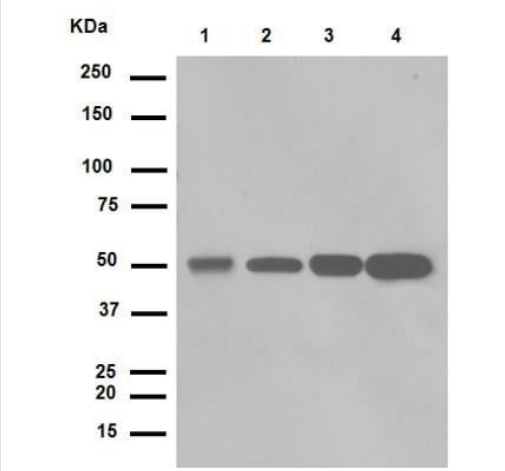
ab174316 Anti-LOX antibody 1:5000 dilution (0.1mg/ml)

ab179483 Anti-HIF-1 alpha antibody 1:500 dilution (0.3mg/ml)

Blocking buffer / Dilution buffer and concentration:

5% NFDM/TBST

LOX and HIF-1 alpha could be induced under hypoxia condition (PMID: 23545606, PMID: 30226558).



Western blot - Anti-LOX antibody [EPR4025] (ab174316)

All lanes : Anti-LOX antibody [EPR4025] (ab174316) at 1/3700 dilution (purified)

Lane 1 : WI-38 cell lysate
Lane 2 : Jurkat cell lysate
Lane 3 : Mouse brain
Lane 4 : Rat brain

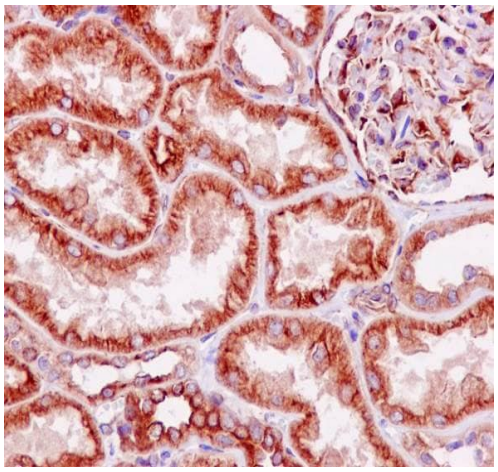
Lysates/proteins at 20 µg per lane.

Secondary
All lanes : HRP goat anti-rabbit (H+L) at 1/1000 dilution

Predicted band size: 47 kDa
Observed band size: 50 kDa

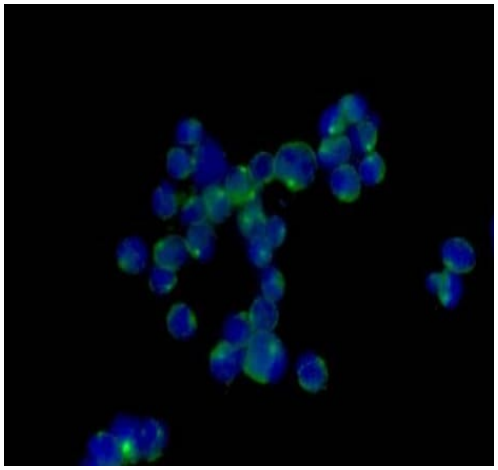
Blocking buffer: 5% NFDM/TBST

Dilution buffer: 5% NFDM/TBST



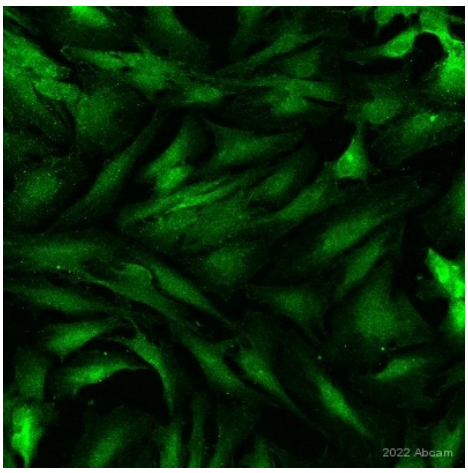
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-LOX antibody [EPR4025] (ab174316)

Immunohistochemical staining of paraffin embedded human kidney with purified ab174316 at a working dilution of 1 in 900. The secondary antibody used is a HRP polymer for rabbit IgG. The sample is counter-stained with hematoxylin. Antigen retrieval was perfomed using Tris-EDTA buffer, pH 9.0.



Immunocytochemistry/ Immunofluorescence - Anti-LOX antibody [EPR4025] (ab174316)

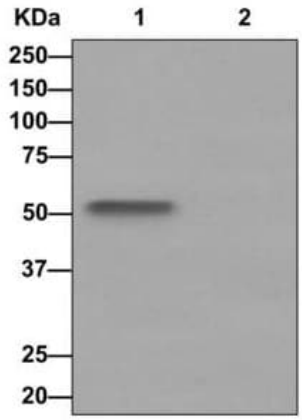
Immunofluorescence staining of Jurkat cells with purified ab174316 at a working dilution of 1 in 300, counter-stained with DAPI. The secondary antibody was Alexa Fluor® 488 goat anti rabbit, used at a dilution of 1 in 200. The cells were fixed in 4% PFA.



Immunocytochemistry/ Immunofluorescence - Anti-LOX antibody [EPR4025] (ab174316)

This image is courtesy of an anonymous Abreview

Immunocytochemistry/ Immunofluorescence analysis of formaldehyde-fixed Triton X-100 permeabilized human chondrocytes staining with ab174316 at 1/100 dilution in PBS with 0.1% triton x100. Secondary antibody was Alexa Fluor® 488 Goat Anti-Rabbit at 1/2000 dilution. Samples were incubated with the primary antibody for 30 minutes at 37°C. Blocking was with 0.1% BSA for 30 minutes at 37°C (ref: PMC7204390)



Immunoprecipitation - Anti-LOX antibody [EPR4025] (ab174316)

Western blot analysis on immunoprecipitation pellet from (Lane 1) WI-38 (Human fetal lung fibroblast cell line) cells lysate or (Lane 2) 1X PBS (negative control) using unpurified ab174316 at a 1/10 dilution and HRP-conjugated anti-rabbit IgG preferentially detecting the non-reduced form of rabbit IgG.

Anti-LOX antibody [EPR4025] (ab174316)

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