

Product Datasheet

LOX Antibody - BSA Free NB100-2527

Unit Size: 0.1 ml

Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

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NB100-2527

LOX Antibody - BSA Free

Product Information

Unit Size	0.1 ml
Concentration	1.0 mg/ml
Storage	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS pH 7.2

Product Description

Host	Rabbit
Gene ID	4015
Gene Symbol	LOX
Species	Human, Mouse, Rat, Porcine
Reactivity Notes	Rat reactivity reported in scientific literature (PMID: 27169768). Immunogen displays the following percentage of sequence identity for non-tested species: bovine (92%), chicken (92%), xenopus (85%). Porcine reactivity reported in scientific literature (PMID: 30036726).
Immunogen	A synthetic peptide made to an internal region of the human LOX protein (within residues 200-300). [Swiss-Prot P28300].

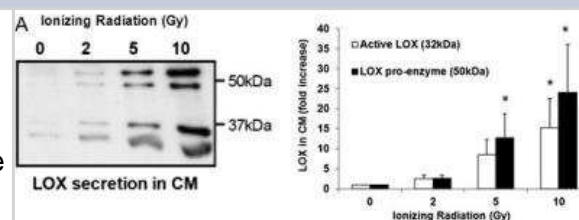
Product Application Details

Applications	Western Blot, Simple Western, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Knockdown Validated
Recommended Dilutions	Western Blot 0.5-4ug/ml, Simple Western 1:25, Immunohistochemistry 1:100-1:250, Immunocytochemistry/ Immunofluorescence 1:100, Immunohistochemistry-Paraffin 1:100-1:250, Knockdown Validated
Application Notes	<p>This LOX antibody is useful for Immunocytochemistry/Immunofluorescence, Immunohistochemistry-paraffin embedded sections, and Western blot. In Western blot, bands are observed ~58 kDa representing glycosylated Lox and ~32 kDa representing the mature, secreted form of Lox. In ICC/IF nuclear staining was observed in HeLa cells, which is expected for the mature form of LOX according to published literature (PMID 17287363 and 10996848).</p> <p>In Simple Western only 10 - 15 uL of the recommended dilution is used per data point.</p> <p>See Simple Western Antibody Database for Simple Western validation: Tested in HeLa lysate 1.0 mg/mL, separated by Size, antibody dilution of 1:25, apparent MW was 27 kDa. Separated by Size-Wes, Sally Sue/Peggy Sue.</p>

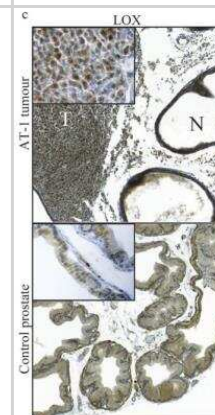


Images

Western Blot: LOX Antibody [NB100-2527] - LOX secretion and activity in response to tumor cell irradiation. Western blot of LOX zymogen (50 kDa) and active form (32 kDa) in conditioned media derived from irradiated A549 lung carcinoma cells 16-20 h after irradiation and quantification of band intensities from 3 independent experiments. Image collected and cropped by CiteAb from the following publication (<https://bmccancer.biomedcentral.com/articles/10.1186/1471-2407-14-532>) licensed under a CC-BY license.



Immunohistochemistry-Paraffin: LOX Antibody [NB100-2527] - Expression of Lox and Loxl1-Loxl4 mRNAs in orthotopic rat prostate tumours and in the surrounding normal rat prostate tissue. Representative sections from a 10-day orthotopic AT-1 rat prostate tumour (T), tumour-adjacent normal rat prostate tissue (N), and tumour-free control rat prostate tissue stained for LOX (inserts show LOX staining in higher magnifications). Image collected and cropped by CiteAb from the following publication (<https://www.nature.com/articles/srep19608>), licensed under a CC-BY license.



Simple Western: LOX Antibody [NB100-2527] - Simple Western shows a specific band for LOX in 1.0 mg/ml of HeLa cell lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.



Immunohistochemistry-Paraffin: LOX Antibody [NB100-2527] - LOX in fibrotic mice lung tissue. Primary antibody at 1:100, incubated overnight at 4C. Image from verified customer review.

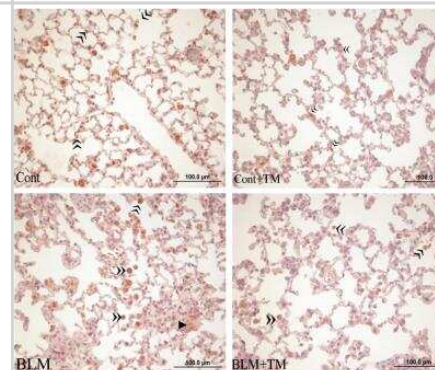
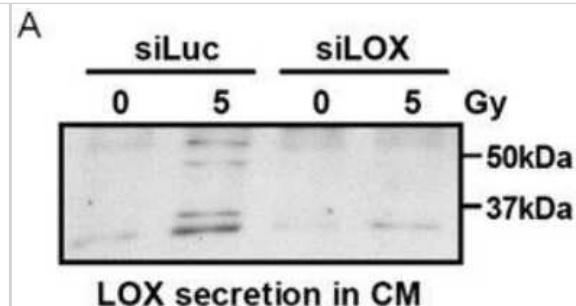
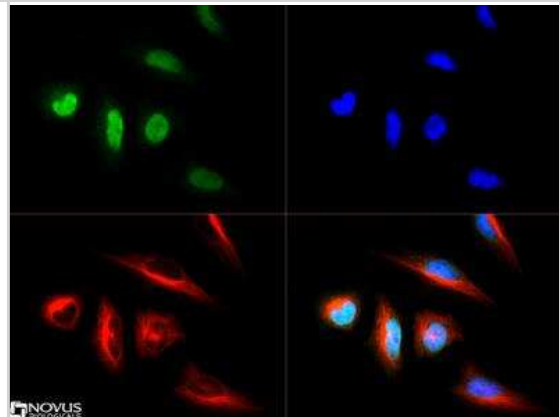


Figure 3. LOX immunoreactivity was shown by arrow head (◄) in the cell and ECM (►). Mayer's Hematoxylin stain.

Western Blot: LOX Antibody [NB100-2527] - IR-induced LOX promotes the invasive capacity of naive tumor cells. Western blot of LOX in conditioned media derived from untreated and irradiated A549 cells, transfected with siLuc-control or siLOX-RNA. Image collected and cropped by CiteAb from the following publication (<https://bmccancer.biomedcentral.com/articles/10.1186/1471-2407-14-532>) licensed under a CC-BY license.



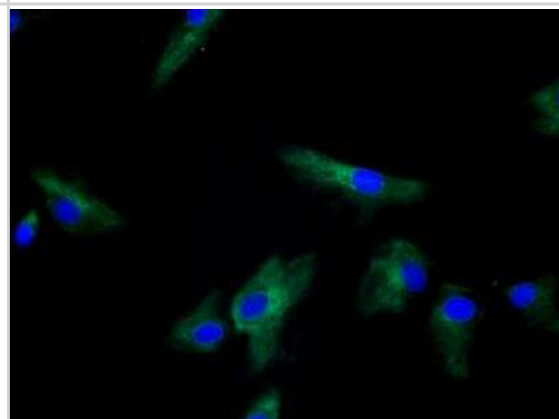
Immunocytochemistry/Immunofluorescence: LOX Antibody [NB100-2527] - LOX antibody was tested in HeLa cells with Dylight 488 (green). Nuclei and alpha-tubulin were counterstained with DAPI (blue) and Dylight 550 (red).



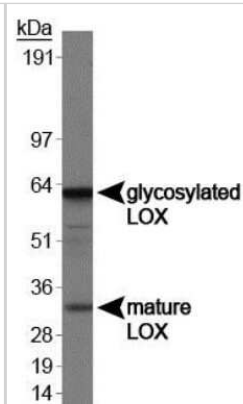
Immunohistochemistry: LOX Antibody [NB100-2527] - IR-enhanced LOX in tumor xenografts. Tumor tissue from A549-derived tumor xenografts treated with 1 x 10 Gy and 2 x 10 Gy (with 12 h between fractions) and evaluated by immunohistochemistry for LOX at different time points after irradiation. Whole tumor sections were quantified for specific LOX-staining intensity. Each treatment group consists of 3 animals. At least 3 sections per tumor/animal were analyzed. Image collected and cropped by CiteAb from the following publication (<https://bmccancer.biomedcentral.com/articles/10.1186/1471-2407-14-532>) licensed under a CC-BY license.



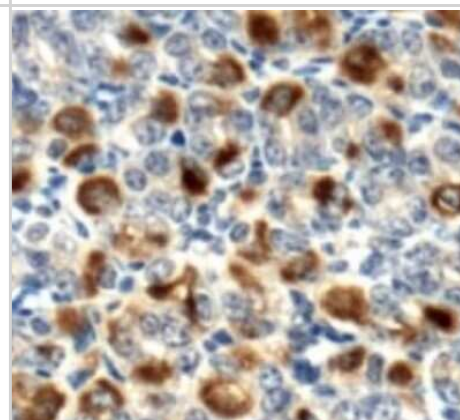
Immunocytochemistry/Immunofluorescence: LOX Antibody [NB100-2527] - Staining in human fibroblasts. Image from verified customer review.



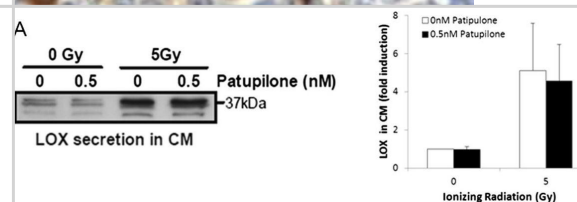
Western Blot: LOX Antibody [NB100-2527] - Analysis of LOX in human kidney using NB100-2527.



Immunohistochemistry: LOX Antibody [NB100-2527] - Staining of LOX in mouse stomach.



Western Blot: LOX Antibody [NB100-2527] - Patupilone counteracts hypoxia- but not IR-induced LOX-secretion. (A) Western blot of basal & IR-induced LOX in conditioned media derived from patupilone-untreated or patupilone-pretreated (0.5 nM) cells & quantification of band intensities from 3 independent experiments. (B) Western blot of basal & hypoxia-induced LOX in conditioned media derived from patupilone-untreated or patupilone-pretreated (0.5 nM) cells & quantification of band intensities from 3 independent experiments. (C) LOX gene transcription 16 h after irradiation & hypoxia, determined by RT-PCR, averaged over 3 independent experiments. Image collected & cropped by CiteAb from the following publication (<https://bmccancer.biomedcentral.com/articles/10.1186/1471-2407-14-532>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Cetin M, Saatci O, Rezaeian AH et Al. A highly potent bi-thiazole inhibitor of LOX rewires collagen architecture and enhances chemoresponse in triple-negative breast cancer Cell Chem Biol 2024-07-09 [PMID: 39043186]

Masaru Sasaki, Takeo Hara, Joshua X. Wang, Yusen Zhou, Kanak V. Kennedy, Chizoba N. Umeweni, Maiya A. Alston, Zachary C. Spergel, Satoshi Ishikawa, Ryugo Teranishi, Ritsu Nakagawa, Emily A. Mcmillan, Kelly A. Whelan, Tatiana A. Karakasheva, Kathryn E. Hamilton, Melanie A. Ruffner, Amanda B. Muir Lysyl Oxidase Regulates Epithelial Differentiation and Barrier Integrity in Eosinophilic Esophagitis Cellular and Molecular Gastroenterology and Hepatology 2024-02-09 [PMID: 38340809]

Laura Valls-Lacalle, Corall Negre-Pujol, Cristina Rodríguez, Saray Varona, Antoni Valera-Cañellas, Marta Consegal, Jose Martínez-González, Antonio Rodríguez-Sinovas Opposite Effects of Moderate and Extreme Cx43 Deficiency in Conditional Cx43-Deficient Mice on Angiotensin II-Induced Cardiac Fibrosis Cells 2019-10-22 [PMID: 31652649]

Ning Y, Zhou IY, Roberts JD Jr et al. Molecular MRI quantification of extracellular aldehyde pairs for early detection of liver fibrogenesis and response to treatment Science Translational Medicine 2022-09-21 [PMID: 36130015] (Immunohistochemistry)

Herum KM, Lunde IG, Skrbic B et al. Syndecan-4 signaling via NFAT regulates extracellular matrix production and cardiac myofibroblast differentiation in response to mechanical stress Journal of Molecular and Cellular Cardiology 2013-01-01 [PMID: 23178899] (Immunohistochemistry, Western Blot)

Yang YL, Tsai MC, Chang YH et al. MIR29A Impedes Metastatic Behaviors in Hepatocellular Carcinoma via Targeting LOX, LOXL2, and VEGFA International Journal of Molecular Sciences 2021-06-01 [PMID: 34206143]

Jiang C, Wang M, Yao W et al. Comprehensive Analysis on Prognosis and Immune Infiltration of Lysyl Oxidase Family Members in Pancreatic Adenocarcinoma With Experimental Verification Frontiers in Molecular Biosciences 2022-04-01 [PMID: 35433829] (Immunohistochemistry)

Wang Q, Sundar IK, Lucas JH et al. Circadian clock molecule REV-ERB β regulates lung fibrotic progression through collagen stabilization Nature communications 2023-03-09 [PMID: 36894533] (Western Blot, Immunohistochemistry-Paraffin, Human, Mouse)

Sasaki M, Hara T, Wang JX et al. Lysyl oxidase regulates epithelial differentiation and barrier integrity in eosinophilic esophagitis bioRxiv : the preprint server for biology 2023-03-28 [PMID: 37034590] (WB)

Cheng W, Lawson C, Liu H et al. Exploration of Mediators Associated with Myocardial Remodelling in Feline Hypertrophic Cardiomyopathy Animals 2023-06-26 [PMID: 37443910] (IHC-P, Feline)

Novotny T, Eckhardt A, Doubkova M et al. The possible role of hypoxia in the affected tissue of relapsed clubfoot Scientific reports 2022-03-15 [PMID: 35292718] (IF/IHC, Human)

Camasao DB, Li L, Drouin B et al. Physiologically relevant platform for an advanced in vitro model of the vascular wall: focus on in situ fabrication and mechanical maturation In vitro models 2022-01-01

More publications at <http://www.novusbio.com/NB100-2527>



Procedures

Western Blot Protocol

Specific for LOX Antibody (NB100-2527)

LOX Antibody:

1. Perform SDS-PAGE (4-12%, Bis-Tris) on samples to be analyzed, loading 40 ug of total protein per lane.
2. Transfer proteins to Nitrocellulose according to the instructions provided by the manufacturer of the transfer apparatus.
3. Rinse membrane with dH₂O and then stain the blot using ponceau S for 1-2 minutes to access the transfer of proteins onto the nitrocellulose membrane. Rinse the blot in water to remove excess stain and mark the lane locations and locations of molecular weight markers using a pencil.
4. Rinse the blot in TBS for approximately 5 minutes.
5. Block the membrane using 5% non-fat dry milk + 1% BSA in TBS, overnight at 4C.
6. Rinse the membrane in dH₂O and then wash the membrane in wash buffer [TBS + 0.1% Tween] 3 times for 10 minutes each.
7. Dilute the rabbit anti-LOX primary antibody (NB 100-2527) in blocking buffer and incubate 1 hour at room temperature.
8. Rinse the membrane in dH₂O and then wash the membrane in wash buffer [TBS + 0.1% Tween] 3 times for 10 minutes each.
9. Apply the diluted rabbit-IgG HRP-conjugated secondary antibody in blocking buffer (as per manufacturer's instructions) and incubate 1 hour at room temperature.
10. Wash the blot in wash buffer [TBS + 0.1% Tween] 3 times for 10 minutes each (this step can be repeated as required to reduce background).
11. Apply the detection reagent of choice in accordance with the manufacturer's instructions (Pierce's ECL).

****Note:** Tween-20 can be added to the blocking or antibody dilution buffer at a final concentration of 0.05-0.2%, provided it does not interfere with antibody-antigen binding.

Immunohistochemistry-paraffin embedded sections

(NB100-2527)

LOX Antibody:

Antigen unmasking

1. Bring slides to a boil in 10 mM sodium citrate buffer pH 6.0 then maintain at a sub-boiling temperature for 10 minutes.
2. Cool slides on bench top for 30 minutes.

Staining

1. Wash sections in dH₂O three times for 5 minutes each.
2. Wash section in wash buffer (1X PBS/0.1% Tween-20 (1X PBST)) for 5 minutes.
3. Block each section with 100-400ul blocking solution (1X PBST, 5% goat serum) for 1 hour at room temperature.
4. Remove blocking solution and add 100-400 ul primary antibody diluted in 1X PBST, 5% goat serum to each section.
5. Incubate overnight at 4C.
6. Remove antibody solution and wash sections in wash buffer three times for 5 minutes each.
7. Add 100-400 ul biotinylated secondary antibody, diluted in 1X PBST, 5% goat serum.
8. Incubate 30 minutes at room temperature.
9. Remove secondary antibody solution and wash sections three times with wash buffer for 5 minutes each.
10. Add 100-400 ul Streptavidin HRP reagent to each section and incubate for 30 minutes at room temperature.
11. Wash sections three times in wash buffer for 5 minutes each.
12. Add 100-400 ul DAB substrate to each section and monitor staining closely.
13. As soon as the sections develop, immerse slides in dH₂O.
14. Counterstain sections in hematoxylin.
15. Wash sections in dH₂O two times for 5 minutes each.
16. Dehydrate sections.
17. Mount coverslips.



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Products Related to NB100-2527

NB820-59661	Mouse Kidney Whole Tissue Lysate (Adult Whole Normal)
NB100-2527PEP	LOX Antibody Blocking Peptide
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

Limitations

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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