Product Datasheet

LDLR Antibody - BSA Free
NBP1-06709

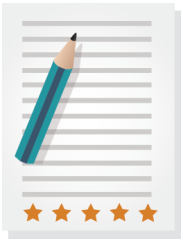
Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

Reviews: 1 Publications: 17

Protocols, Publications, Related Products, Reviews, Research Tools and Images at:
www.novusbio.com/NBP1-06709

Updated 1/23/2024 v.20.1



NBP1-06709

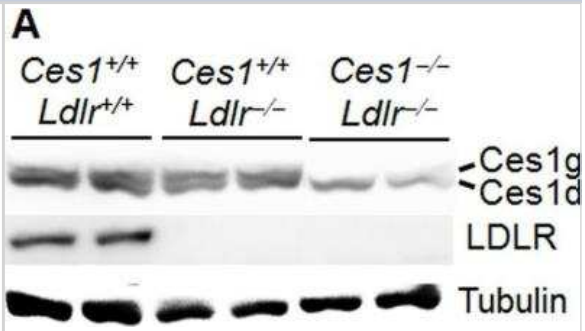
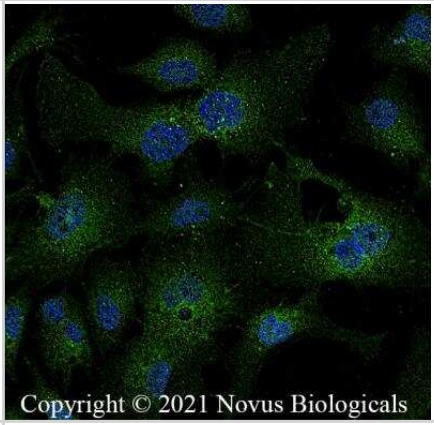
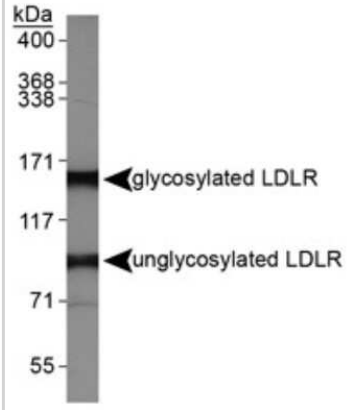
LDLR Antibody - BSA Free

Product Information	
Unit Size	0.1 ml
Concentration	1 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS

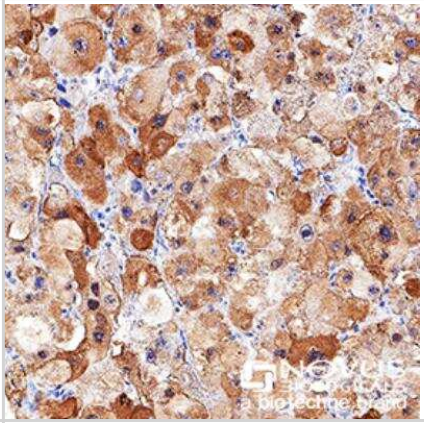
Product Description	
Host	Rabbit
Gene ID	3949
Gene Symbol	LDLR
Species	Human, Mouse
Reactivity Notes	Predicted to react with monkey based on 100% sequence homology.
Specificity/Sensitivity	This is specific for both the unglycosylated and glycosylated forms of the LDL Receptor.
Immunogen	Synthetic peptide made to an internal portion of the human LDL Receptor protein (within residues 500-550). [Swiss-Prot# P01130]

Product Application Details	
Applications	Western Blot, Simple Western, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Knockout Validated
Recommended Dilutions	Western Blot 0.5 - 2 ug/ml, Simple Western 1:100, Immunohistochemistry 1:200 - 1:1000, Immunocytochemistry/ Immunofluorescence 1 - 2 ug/ml, Immunohistochemistry-Paraffin 1:200 - 1:1000, Knockout Validated
Application Notes	This LDL Receptor antibody is useful for Immunocytochemistry/Immunofluorescence and Western blot, where bands are seen ~95 kDa and ~160 kDa representing the unglycosylated and glycosylated forms of the LDL receptor, respectively. In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. Separated by Size-Wes, Sally Sue/Peggy Sue.

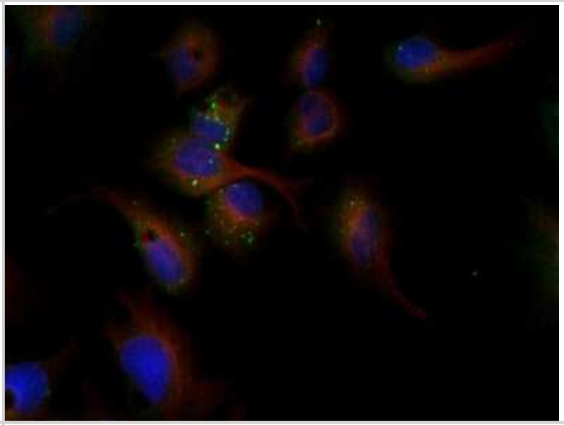
Images

Knockout Validated: LDLR Antibody [NBP1-06709] - 8-weeks-old male Ces1 -/- Ldlr -/- (DKO) mice and control littermates Ces1 +/+ Ldlr -/- (Ldlr -/-) mice were fed a Western diet for 16 weeks (n = 8). Hepatic Ces1/Ces1g and LDLR protein levels were determined. Image collected and cropped by CiteAb from the following publication (http://www.nature.com/articles/s41598-017-18232-x) licensed under a CC-BY license.	
Immunocytochemistry/Immunofluorescence: LDLR Antibody [NBP1-06709] - HepG2 cells were fixed for 10 minutes using 4% paraformaldehyde for 10 minutes and permeabilized in 0.05% Triton X-100 in PBS for 5 minutes. The cells were incubated with anti-LDLR at 1 ug/ml overnight at 4C and detected with an anti-rabbit Dylight 488 (Green) at a 1:1000 dilution. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 40X objective.	
Simple Western: LDLR Antibody [NBP1-06709] - LDL R Antibody [NBP1-06709] - Simple Western lane view shows a specific band for LDL R in 0.05 mg/ml of HepG2 lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.	
Western Blot: LDLR Antibody [NBP1-06709] - LDL R Antibody [NBP1-06709] - Western Blot on HepG2 whole cell lysate.	

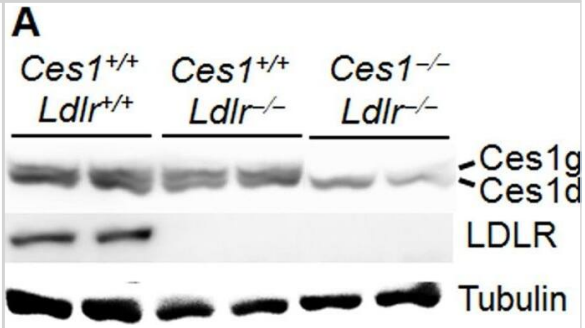
Immunohistochemistry-Paraffin: LDL R Antibody [NBP1-06709] - LDL Receptor was detected in immersion fixed paraffin-embedded sections of human liver cancer using rabbit anti-human antibody (Catalog # NBP1-06709) at 1:3000 dilution overnight at 4C. Tissue was stained using the VisuCyte anti-rabbit HRP polymer detection reagent (Catalog # VC003) with DAB chromogen (brown) and counterstained with hematoxylin (blue).



Immunocytochemistry/Immunofluorescence: LDL R Antibody [NBP1-06709] - LDL receptor antibody was tested in HepG2 cells with Dylight 488 (green). Nuclei and alpha-tubulin were counterstained with DAPI (blue) and Dylight 550 (red).



Loss of Ces1/Ces1g in Ldlr-/- mice causes hypolipidemia and protects against atherosclerosis. (A-H) 8-weeks-old male Ces1-/-Ldlr-/- (DKO) mice and control littermates Ces1+/+Ldlr-/- (Ldlr-/-) mice were fed a Western diet for 16 weeks (n = 8). Hepatic Ces1/Ces1g and LDLR protein levels were determined (A). Plasma TG (B) and cholesterol (C) levels were determined. Plasma TG (D) and cholesterol (E) lipoprotein profiles were analyzed by FPLC. En face aortas were stained by oil red O and representative images are shown (F). En face aorta lesion size was quantified (G). Aortic roots were also stained with oil red O and representative images are shown (H). Aortic root lesion size was quantified (I). **P < 0.01. Image collected and cropped by CiteAb from the following publication (https://www.nature.com/articles/s41598-017-18232-x), licensed under a CC-BY licence.



Publications

Hu S, Zhu Y, Zhao X et al. Hepatocytic lipocalin-2 controls HDL metabolism and atherosclerosis via Nedd4-1-SR-BI axis in mice Developmental cell 2023-10-18 [PMID: 37863040] (In vitro, Mouse)

Ho WY, Chang JC, Lim K et al. TDP-43 mediates SREBF2-regulated gene expression required for oligodendrocyte myelination Journal of Cell Biology 2021-09-06 [PMID: 34347016] (IHC-P)

Thapa K, Kadiri JJ, Saukkonen K et al. Melanocortin 1 receptor regulates cholesterol and bile acid metabolism in the liver eLife 2023-07-25 [PMID: 37490042]

O'Neill KI, Kuo LW, Williams MM et al. NPC1 Confers Metabolic Flexibility in Triple Negative Breast Cancer Cancers 2022-07-21 [PMID: 35884604] (WB, Human)

Aldar I, Roy A, ChrEtien M et al. Blockers of PCSK9 Ribosome Synthesis: Computational Predictions and in Vitro Confirmation SSRN Electronic Journal 2022-03-26 (WB, Human)

Kohlhaas J, Jager M. A, et al. Endothelial cells control vascular smooth muscle cell cholesterol levels by regulating 24 -dehydrocholesterol reductase expression. Exp Cell Res 2021-01-07 [PMID: 33422461] (Simple Western, Human)

Xu Y, Li Y, Jadhav K, et al. Hepatocyte ATF3 protects against atherosclerosis by regulating HDL and bile acid metabolism Nature metabolism 2021-01-01 [PMID: 33462514]

Sun L, Yang X et al. Activation of Adiponectin Receptor Regulates Proprotein Convertase Subtilisin/Kexin Type 9 Expression and Inhibits Lesions in ApoE-Deficient Mice. Arterioscler Thromb Vasc Biol 2017-01-07 [PMID: 28546220] (WB, Mouse, Human)

He B, Moreau R R-alpha-Lipoic Acid and 4-Phenylbutyric Acid Have Distinct Hypolipidemic Mechanisms in Hepatic Cells Biomedicines 2020-08-15 [PMID: 32824248] (WB, Human)

Xu Y, Zhu Y, Bawa F et al. HepatocyteSpecific Expression of Human Carboxylesterase 1 Attenuates Diet-Induced Steatohepatitis and Hyperlipidemia in Mice Hepatol Commun 2020-02-20 [PMID: 32258948] (WB, Mouse)

Biswas L, Zeng Z, Graham A, Shu X Gypenosides mediate cholesterol efflux and suppress oxidized LDL induced inflammation in retinal pigment epithelium cells Exp. Eye Res. 2020-01-10 [PMID: 31931003] (WB, Human)

Yang Yingjie, Yang Qian, Yang Jian et al. Angiotensin II induces cholesterol accumulation and injury in podocytes. Scientific Reports 2017-09-06 [PMID: 28878222] (WB, Human)

More publications at http://www.novusbio.com/NBP1-06709

Procedures

Western Blot Protocol for LDLR Antibody (NBP1-06709)
Western Blot Protocol

1. Perform SDS-PAGE on samples to be analyzed, loading 10-25 ug of total protein per lane.
2. Transfer proteins to PVDF membrane according to the instructions provided by the manufacturer of the membrane and transfer apparatus.
3. Stain the membrane with Ponceau S (or similar product) to assess transfer success, and mark molecular weight standards where appropriate.
4. Rinse the blot TBS -0.05% Tween 20 (TBST).
5. Block the membrane in 5% Non-fat milk in TBST (blocking buffer) for at least 1 hour.
6. Wash the membrane in TBST three times for 10 minutes each.
7. Dilute primary antibody in blocking buffer and incubate overnight at 4C with gentle rocking.
8. Wash the membrane in TBST three times for 10 minutes each.
9. Incubate the membrane in diluted HRP conjugated secondary antibody in blocking buffer (as per manufacturer's instructions) for 1 hour at room temperature.
10. Wash the blot in TBST three 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.

Immunohistochemistry-Paraffin Protocol for LDLR Antibody (NBP1-06709)
Immunohistochemistry-Paraffin Embedded Sections

Antigen Unmasking:
Bring slides to a boil in 10 mM sodium citrate buffer (pH 6.0) then maintain at a sub-boiling temperature for 10 minutes. Cool slides on bench-top for 30 minutes (keep slides in the sodium citrate buffer at all times).

Staining:
1. Wash sections in deionized water three times for 5 minutes each.
2. Wash sections in PBS for 5 minutes.
3. Block each section with 100-400 ul blocking solution (1% BSA in PBS) for 1 hour at room temperature.
4. Remove blocking solution and add 100-400 ul diluted primary antibody. Incubate overnight at 4 C.
5. Remove antibody solution and wash sections in wash buffer three times for 5 minutes each.
6. Add 100-400 ul HRP polymer conjugated secondary antibody. Incubate 30 minutes at room temperature.
7. Wash sections three times in wash buffer for 5 minutes each.
8. Add 100-400 ul DAB substrate to each section and monitor staining closely.
9. As soon as the sections develop, immerse slides in deionized water.
10. Counterstain sections in hematoxylin.
11. Wash sections in deionized water two times for 5 minutes each.
12. Dehydrate sections.
13. Mount coverslips.

Immunocytochemistry/Immunofluorescence Protocol for LDLR Antibody (NBP1-06709)
Immunocytochemistry Protocol

Culture cells to appropriate density in 35 mm culture dishes or 6-well plates.

1. Remove culture medium and wash the cells briefly in PBS. Add 10% formalin to the dish and fix at room temperature for 10 minutes.
2. Remove the formalin and wash the cells in PBS.
3. Permeablize the cells with 0.1% Triton X100 or other suitable detergent for 10 min.
4. Remove the permeablization buffer and wash three times for 10 minutes each in PBS. Be sure to not let the specimen dry out.
5. To block nonspecific antibody binding, incubate in 10% normal goat serum from 1 hour to overnight at room temperature.
6. Add primary antibody at appropriate dilution and incubate overnight at 4C.
7. Remove primary antibody and replace with PBS. Wash three times for 10 minutes each.
8. Add secondary antibody at appropriate dilution. Incubate for 1 hour at room temperature.
9. Remove secondary antibody and replace with PBS. Wash three times for 10 minutes each.
10. Counter stain DNA with DAPi if required.

Novus Biologicals USA
10730 E. Briarwood Avenue
Centennial, CO 80112
USA
Phone: 303.730.1950
Toll Free: 1.888.506.6887
Fax: 303.730.1966
nb-customerservice@bio-techne.com

Bio-Techne Canada
21 Canmotor Ave
Toronto, ON M8Z 4E6
Canada
Phone: 905.827.6400
Toll Free: 855.668.8722
Fax: 905.827.6402
canada.inquires@bio-techne.com

Bio-Techne Ltd
19 Barton Lane
Abingdon Science Park
Abingdon, OX14 3NB, United Kingdom
Phone: (44) (0) 1235 529449
Free Phone: 0800 37 34 15
Fax: (44) (0) 1235 533420
info.EMEA@bio-techne.com

General Contact Information
www.novusbio.com
Technical Support: nb-technical@bio-techne.com
Orders: nb-customerservice@bio-techne.com
General: novus@novusbio.com

Products Related to NBP1-06709

NBL1-12475	LDLR Overexpression Lysate
NBP1-06709PEP	LDLR 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.

For more information on our 100% guarantee, please visit www.novusbio.com/guarantee

Earn gift cards/discounts by submitting a review: www.novusbio.com/reviews/submit/NBP1-06709

Earn gift cards/discounts by submitting a publication using this product: www.novusbio.com/publications