

Product Datasheet

OXPAT Antibody - BSA Free

NB110-60509

Unit Size: 0.1 ml

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

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NB110-60509

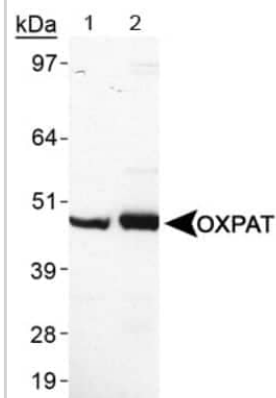
OXPAT Antibody - BSA Free

Product Information	
Unit Size	0.1 ml
Concentration	1.0 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
Target Molecular Weight	50 kDa
Product Description	
Description	Novus Biologicals Rabbit OXPAT Antibody - BSA Free (NB110-60509) is a polyclonal antibody validated for use in IHC, WB, Flow, ICC/IF, Simple Western and IP. Anti-OXPAT Antibody: Cited in 14 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Rabbit
Gene ID	440503
Gene Symbol	PLIN5
Species	Human, Mouse, Porcine, Bovine
Reactivity Notes	Porcine reactivity reported in scientific literature (PMID: 29094660). Immunogen displays the following percentage of sequence identity for non-tested species: sheep (94%), rat (84%).
Immunogen	A synthetic peptide made to a region of the human OXPAT protein, within residues 300-400. [UniProt# Q00G26]
Product Application Details	
Applications	Western Blot, Simple Western, Immunohistochemistry-Paraffin, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen
Recommended Dilutions	Western Blot 0.5-2.0 ug/ml, Simple Western 10 ug/ml, Immunohistochemistry 1.0-5.0 ug/ml, Immunocytochemistry/ Immunofluorescence reported in scientific literature (PMID 26096040), Immunohistochemistry-Paraffin 1.0-5.0 ug/ml, Immunohistochemistry-Frozen reported in scientific literature (PMID 24648545)
Application Notes	In WB a band can be seen at approx. 50 kDa, representing the OXPAT protein. In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. See Simple Western Antibody Database for Simple Western validation: Tested in Human Heart and Mouse Heart lysate 0.5 mg/mL, separated by Size, antibody dilution of 10 ug/mL. Separated by Size-Wes, Sally Sue/Peggy Sue. The observed molecular weight of the protein may vary from the listed predicted molecular weight due to post translational modifications, post translation cleavages, relative charges, and other experimental factors.

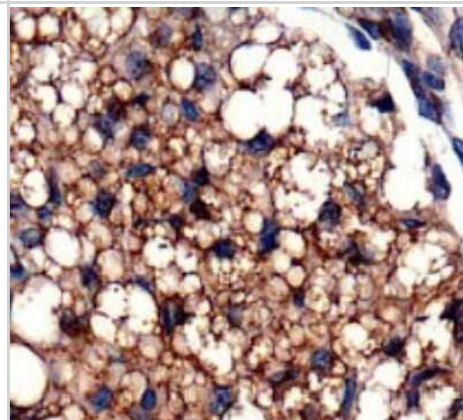


Images

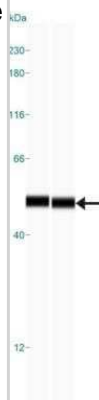
Western Blot: OXPAT Antibody [NB110-60509] - Detection of OXPAT in human (lane 1) and mouse (lane 2) heart lysate.



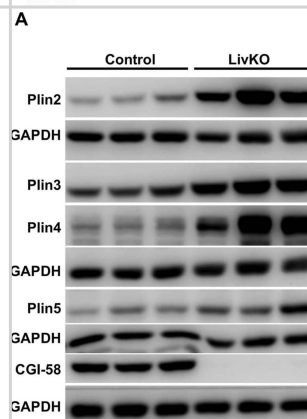
Immunohistochemistry: OXPAT Antibody [NB110-60509] - Staining of OXPAT in paraffin embedded mouse fat.



Simple Western: OXPAT Antibody [NB110-60509] - Simple Western lane view shows a specific band for OXPAT in 0.5 mg/ml of Human Heart (left) and Mouse Heart (right) lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.

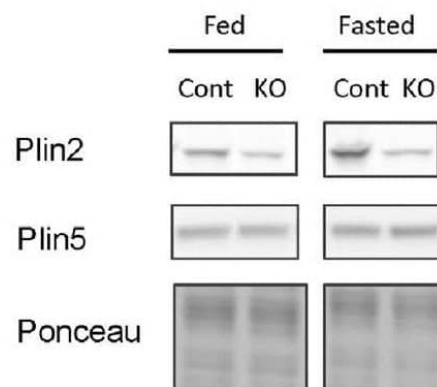


Relative levels of hepatic proteins and mRNAs of PAT family genes in the male mice fed the Western diet for 3 weeks starting at 6 weeks of age. (A) Immunoblots of perilipins and control proteins. (B) Densitometry of the immunoblots in A (n = 5–6). (C) Relative levels of hepatic mRNAs for perilipins in the mice at necropsy (n = 5–6). *P < 0.05; **P < 0.01. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/32170127>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

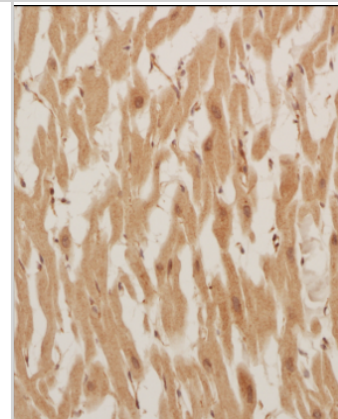


Reduction in myocardial PPAR α mice lowers cardiac Plin2. Mice were fasted for 16 hrs and A. Plin2 and B. Plin5 protein levels were measured in heart. C Representative western blots [Cont (Control); KO (cPPAR $^{-/-}$)]. D. Lipase activity in heart. Values are mean \pm SEM; n = 5–12; * p<0.05 compared to Control Fed; > p<0.05 compared to Control Fasted. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/35259201>), licensed under a CC0-1.0 license. Not internally tested by Novus Biologicals.

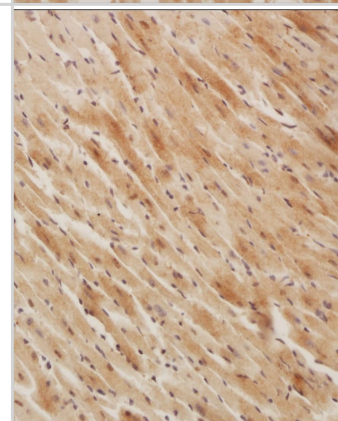
C.



Analysis of a FFPE tissue section of human heart using 1:200 dilution of OXPAT antibody. The staining was developed using HRP labeled anti-rabbit secondary antibody and DAB reagent, and nuclei of cells were counter-stained with hematoxylin.



Analysis of a FFPE tissue section of mouse heart using 1:200 dilution of OXPAT antibody. The staining was developed using HRP labeled anti-rabbit secondary antibody and DAB reagent, and nuclei of cells were counter-stained with hematoxylin.



Publications

Tarry E, Vestergaard S, Petersen E et al. Divergent Changes in Peak Fat Oxidation and Fat max Following 3□Day Dietary Interventions Are Related to Muscle Glycogen Availability in Men Scandinavian Journal of Medicine & Science in Sports 2025-09-08 [PMID: 40922559]

Zhao Y, Albrecht E, Li Z et al. Distinct Roles of Perilipins in the Intramuscular Deposition of Lipids in Glutamine-Supplemented, Low-, and Normal-Birth-Weight Piglets Frontiers in Veterinary Science 2021-06-21 [PMID: 34235195] (Immunohistochemistry-Frozen, Mouse)

Miao H, Li B, Wang Z et al. Lipidome Atlas of the Developing Heart Uncovers Dynamic Membrane Lipid Attributes Underlying Cardiac Structural and Metabolic Maturation Research (Wash D C) 2022-12-19 [PMID: 39290970]

Miao H, Li B, Wang Z et al. Lipidome Atlas of the Developing Heart Uncovers Dynamic Membrane Lipid Attributes Underlying Cardiac Structural and Metabolic Maturation Research 2022-01-01 (WB, Mouse)

Details:

Dilution used in WB 1:500

Gan X, Zhao J, Chen Y et al. Plin5 inhibits proliferation and migration of vascular smooth muscle cell through interacting with PGC-1alpha following vascular injury Bioengineered 2022-04-01 [PMID: 35470759] (WB, IP, Mouse)

Antony R, Aby K, Gao H et al. UCHL1 Regulates Lipid and Perilipin 2 Level in Skeletal Muscle Frontiers in physiology 2022-04-07 [PMID: 35464088] (WB, Mouse)

Dahl N Development of skeletal muscle and adipose tissues in neonatal dairy calves upon a maternal supplementation with essential fatty acids and conjugated linoleic acids Thesis 2022-01-01

Fillmore N, Hou V, Sun J et al. Cardiac specific knock-down of peroxisome proliferator activated receptor alpha prevents fasting-induced cardiac lipid accumulation and reduces perilipin 2 PloS one 2022-03-08 [PMID: 35259201] (WB, Mouse)

Vigelso, A, Prats, C Et al. Higher muscle content of perilipin 5 and endothelial lipase protein in trained than untrained middle-aged men. Physiol Res 2016-06-20 [PMID: 26447519] (FLOW, Human)

Details:

Citation using the PE/Cy7 format of this antibody.

Pantha R, Lee J, Bae J et al. LRH-1 Ameliorates Hepatic Triglyceride Accumulation via Regulation of Perilipin 5 in the Liver Preprints 2021-02-12 (ICC/IF, Mouse)

Larsen Steen, Vigelso Andreas, Dandanell Sune et al. Simvastatin-Induced Insulin Resistance May Be Linked to Decreased Lipid Uptake and Lipid Synthesis in Human Skeletal Muscle: the LIFESTAT Study. J Diabetes Res. 2018-09-12 [PMID: 30276217] (WB, Human)

Zhong W, Fan B, Cong H et al. Oleic acid-induced perilipin 5 expression and lipid droplets formation are regulated by the PI3K/PPAR alpha pathway in HepG2 cells Appl Physiol Nutr Metab 2019-08-01 [PMID: 31274012]

More publications at <http://www.novusbio.com/NB110-60509>

Procedures

Western Blot protocol for OXPAT Antibody (NB110-60509)

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 OXPAT Antibody (NB110-60509)

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.



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Products Related to NB110-60509

NB110-60509PEP	OXPAT Antibody Blocking Peptide
NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
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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