Product Datasheet

Perilipin-3/TIP47 Antibody - BSA Free
NB110-40764SS

Unit Size: 0.025 ml

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

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Publications: 18

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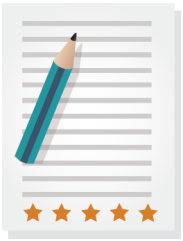
Updated 2/21/2025 v.20.1



NB110-40764SS

Perilipin-3/TIP47 Antibody - BSA Free

Product Information

Unit Size	0.025 ml
Concentration	1.00 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

Product Description

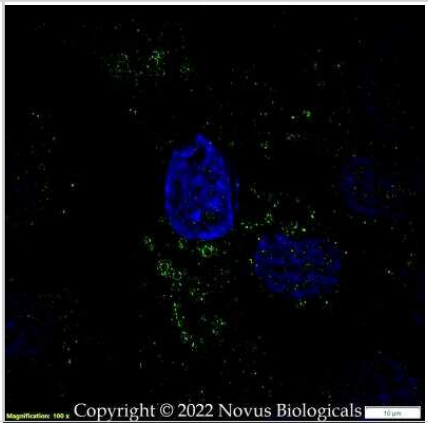
Host	Rabbit
Gene ID	10226
Gene Symbol	PLIN3
Species	Human, Mouse, Porcine, Primate
Immunogen	A synthetic peptide made to a region within the C-terminus (within residues 350-435) of the human TIP47 protein. [Swiss-Prot# O60664]

Product Application Details

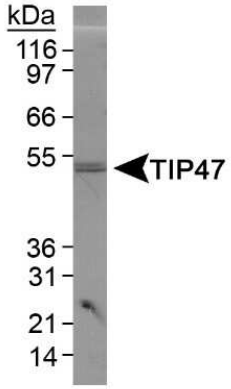
Applications	Western Blot, Immunocytochemistry/ Immunofluorescence
Recommended Dilutions	Western Blot 2 ug/ml, Immunocytochemistry/ Immunofluorescence 1:100
Application Notes	This TIP47 antibody is useful for Western Blot and Immunocytochemistry/Immunofluorescence. In Western Blot analysis, a band is seen at ~47 kDa, representing isoform B in both human (faint) and mouse lysates. In some samples, a ~28 kDa band may be observed which represents a splice isoform. In ICC/IF, endosomal staining was observed in U2OS cells.

Images

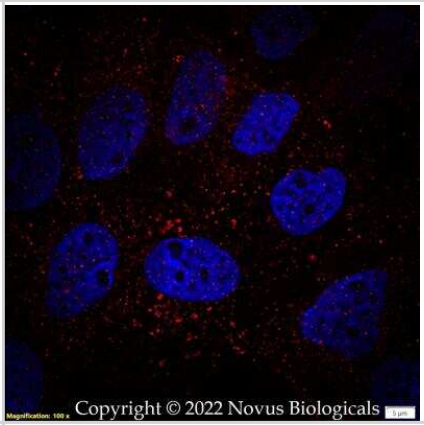
Immunocytochemistry/Immunofluorescence: Perilipin-3/TIP47 Antibody [NB110-40764] - A431 cells were fixed in 4% paraformaldehyde for 10 minutes and permeabilized in 0.05% Triton X-100 in PBS for 5 minutes. The cells were incubated with Perilipin-3/TIP47 Antibody (NB110-40764) at 2ug/ml overnight at 4C and detected with an anti-rabbit DyLight 488 (Green) at a 1:1000 dilution for 60 minutes. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 100X objective and digitally deconvolved.



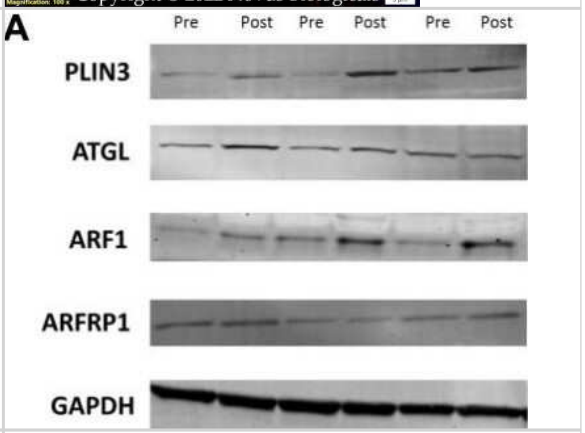
Western Blot: Perilipin-3/TIP47 Antibody [NB110-40764] - Detection of TIP47 in 3T3 L1 lysate.



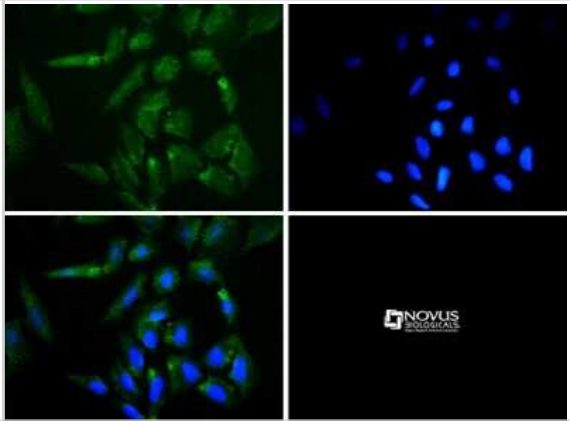
Immunocytochemistry/Immunofluorescence: Perilipin-3/TIP47 Antibody [NB110-40764] - A431 cells were fixed in 4% paraformaldehyde for 10 minutes and permeabilized in 0.05% Triton X-100 in PBS for 5 minutes. The cells were incubated with Perilipin-3/TIP47 Antibody conjugated to DyLight 550 (NB110-40764R) at 5 ug/ml for 1 hour at room temperature. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 100X objective and digitally deconvolved.



Western Blot: Perilipin-3/TIP47 Antibody [NB110-40764] - Changes in protein and gene expression relating to lipolysis with a single bout of endurance exercise in human skeletal muscle. Representative blots of PLIN3, ATGL, ARF1, ARFRP1 and loading control GAPDH. Image collected and cropped by CiteAb from the following publication (https://dx.plos.org/10.1371/journal.pone.0091675), licensed under a CC-BY license.



Immunocytochemistry/Immunofluorescence: Perilipin-3/TIP47 Antibody [NB110-40764] - TIP47 antibody was tested in U2OS cells with Dylight 488 (green). Nuclei and alpha-tubulin were counterstained with DAPI (blue) and Dylight 549 (red).



Publications

Das D, Sharma M, Gahlot D et Al. VPS4A is the selective receptor for lipophagy in mice and humans Mol Cell 2024-11-22 [PMID: 39520981]

Ibayashi M, Tatsumi T, Tsukamoto S. Perilipin2 depletion causes lipid droplet enlargement in the ovarian corpus luteum in mice The Journal of Reproduction and Development 2024-07-15 [PMID: 39010158]

Covington JD, Johannsen DL, Coen PM et al. Intramyocellular Lipid Droplet Size Rather Than Total Lipid Content is Related to Insulin Sensitivity After 8 Weeks of Overfeeding Obesity (Silver Spring). 2017-12-01 [PMID: 29071793]

Junichiro MITSUI, Megumi IBAYASHI, Ryutaro AIZAWA, Tomonori ISHIKAWA, Naoyuki MIYASAKA, Satoshi TSUKAMOTO Lipid droplets synthesized during luteinization are degraded after pregnancy The Journal of Reproduction and Development 2024-02-04 [PMID: 38311402]

Menon D, Bhapkar A, Manchandia B et al. ARL8B mediates lipid droplet contact and delivery to lysosomes for lipid remobilization Cell reports 2023-10-31 [PMID: 37777960] (ICC/IF, Human)

Bajpeyi S, Apaflo JN, Rosas V et al. Effect of an acute long-duration exercise bout on skeletal muscle lipid droplet morphology, GLUT 4 protein, and perilipin protein expression European journal of applied physiology 2023-06-27 [PMID: 37368137]

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)

Whytock KL, Parry SA, Turner MC et al. A high-fat high-calorie diet induces fibre-specific increases in intramuscular triglyceride and perilipin protein expression in human skeletal muscle J. Physiol. (Lond.) 2020-01-20 [PMID: 31958145] (ICC/IF, Human)

Helsley RN, Varadharajan V, Brown AL et al. Obesity-linked suppression of membrane-bound O-acyltransferase 7 (MBOAT7) drives non-alcoholic fatty liver disease Elife 2019-10-17 [PMID: 31621579] (Mouse)

Keenan SN, Meex RC, Lo JCY et al. Perilipin 5 Deletion in Hepatocytes Remodels Lipid Metabolism and Causes Hepatic Insulin Resistance in Mice. Diabetes 2019-01-07 [PMID: 30617219] (WB, Mouse)

Adam M, Heikela H, Sobolewski C, Portius D. Hydroxysteroid (17b) dehydrogenase 13 deficiency triggers hepatic steatosis and inflammation in mice. FASEB J. 2018-01-31 [PMID: 29401633] (WB, Mouse)

Xu M, Zeng Y, Chi D et al. The dynamic pattern of PLIN3 in pig oocytes and cumulus cells during in vitro maturation Zygote 2018-02-01 [PMID: 29233207] (Porcine)

More publications at http://www.novusbio.com/NB110-40764

Procedures

Western Blot protocol for TIP47 Antibody (NB110-40764)
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.

Immunocytochemistry/ Immunofluorescence Protocol for Perilipin-3/TIP47 Antibody (NB110-40764)
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.

Immunohistochemistry-Paraffin Protocol for Perilipin-3/TIP47 Antibody (NB110-40764)
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.

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

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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