Product Datasheet

DGAT1 Antibody - BSA Free
NB110-41487

Unit Size: 0.1 ml

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

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Reviews: 1 Publications: 25

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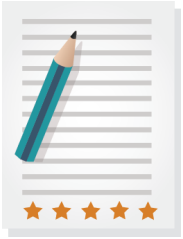
Updated 10/23/2024 v.20.1



NB110-41487

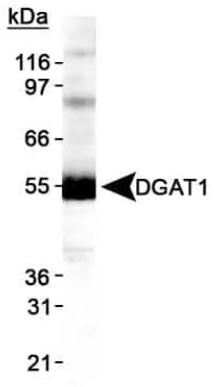
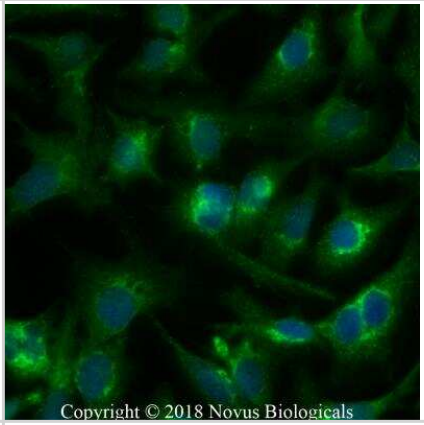
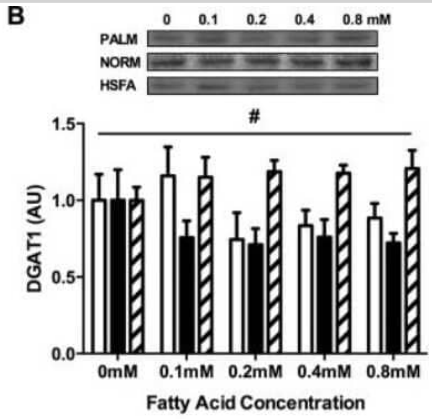
DGAT1 Antibody - BSA Free

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	0.05% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS
Target Molecular Weight	55 kDa

Product Description	
Host	Rabbit
Gene ID	8694
Gene Symbol	DGAT1
Species	Human, Mouse, Rat
Reactivity Notes	Use in Rat reported in scientific literature (PMID:32326330).
Immunogen	A synthetic peptide made to an internal region (within residues 200-300) of human DGAT1. [Swiss-Prot# O75907]

Product Application Details	
Applications	Western Blot, Immunoblotting, Immunocytochemistry/ Immunofluorescence
Recommended Dilutions	Western Blot 2 ug/ml, Immunocytochemistry/ Immunofluorescence 1:40-1:100, Immunoblotting reported in scientific literature (PMID 23668758)
Application Notes	In Western Blot, a band is seen at ~55 kDa. In ICC/IF, staining was observed in the endoplasmic reticulum and cytoplasm of HepG2 cells. This antibody is not applicable for IHC-paraffin embedded sections.

Images

Western Blot: DGAT1 Antibody [NB110-41487] - Detection of DGAT1 in HepG2 lysate.	
Immunocytochemistry/Immunofluorescence: DGAT1 Antibody [NB110-41487] - HepG2 cells were fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X PBS + 0.05% Triton X-100. The cells were incubated with anti-DGAT1 at 5 ug/ml overnight at 4C and detected with an anti-rabbit DyLight 488 (Green) at a 1:500 dilution. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 40X objective.	
Western Blot: DGAT1 Antibody [NB110-41487] - Factors regulating lipid storage and breakdown in C2C12 muscle cells.Muscle cells were incubated with PALM (open), NORM (filled), or HSFA (hatched). Pictured is protein abundance of DGAT1. In the figure panel, the data is expressed relative to a no fatty acid control condition (0mM). In panel B, #P<0.05 for a main effect of HSFA vs. PALM and NORM. Representative blot shown inset above the figure panel. DGAT = diacylglycerol acyltransferase; AU = arbitrary units. Image collected and cropped by CiteAb from the following publication (https://dx.plos.org/10.1371/journal.pone.0120871), licensed under a CC-BY license.	

Publications

Supruniuk E, Miklosz A, Chabowski A Pyrroloquinoline Quinone Modifies Lipid Profile, but Not Insulin Sensitivity, of Palmitic Acid-Treated L6 Myotubes Nat Commun 2020-11-05 [PMID: 33171690]

Eui-Jin Lee, Yeon-Pyo Hong, Yun-Jung Yang Short-term exposure to di(2-ethylhexyl)phthalate may disrupt hepatic lipid metabolism through modulating the oxidative stress in male adolescent rats Environmental Analysis, Health and Toxicology 2024-03-01 [PMID: 38631399]

Kang H, Lee H, Kim K et al. DGKB mediates radioresistance by regulating DGAT1-dependent lipotoxicity in glioblastoma Cell Reports Medicine 2023-01-17 [PMID: 36603576] (Flow Cytometry, Immunohistochemistry)

Ludzki AC, Krueger EM, Gillen JB et al. One week of overeating upregulates angiogenic and lipolytic gene expression in human subcutaneous adipose tissue from exercise trained and untrained adults Applied Physiology, Nutrition, and Metabolism 2022-10-01 [PMID: 35816737] (Western Blot, Block/Neutralize)

Oke SL The Molecular Mechanisms of Hepatic Mitochondrial Dysfunction in Growth-Restricted Offspring with Hyperlipidemia Thesis 2022-01-01

Ahn C, Ryan BJ, Schleh MW et al. Exercise training remodels subcutaneous adipose tissue in adults with obesity even without weight loss The Journal of physiology 2022-03-06 [PMID: 35249225]

Haberl EM, Pohl R, Rein-Fischboeck L Et al. Accumulation of cholesterol, triglycerides and ceramides in hepatocellular carcinomas of diethylnitrosamine injected mice Lipids in health and disease 2021-10-10 [PMID: 34629057] (WB, Mouse)

Oke S, Lee K, Papp R Et Al. In Utero Exposure to 9-Tetrahydrocannabinol Leads to Postnatal Catch-up Growth and Dysmetabolism in the Adult Rat Liver preprints 2021-06-30 [PMID: 34299119] (WB)

Romano A, Friuli M, Del Coco L, et al. Chronic Oleoylethanolamide Treatment Decreases Hepatic Triacylglycerol Level in Rat Liver by a PPARγ/SREBP-Mediated Suppression of Fatty Acid and Triacylglycerol Synthesis Nutrients 2021-01-27 [PMID: 33513874] (WB, Rat, Mouse)

Soltysik K, Ohsaki Y, Tatematsu T et al. Nuclear lipid droplets form in the inner nuclear membrane in a seipin-independent manner The Journal of cell biology 2021-01-04 [PMID: 33315072]

Haberl EM, Pohl R, Rein-Fischboeck L et al. Hepatic lipid profile in mice fed a choline-deficient, low-methionine diet resembles human non-alcoholic fatty liver disease Lipids in health and disease 2020-12-09 [PMID: 33298075] (WB, Mouse)

Yue J T, Abraham M A et al. A fatty acid-dependent hypothalamic-DVC neurocircuitry that regulates hepatic secretion of triglyceride-rich lipoproteins. Nat Commun 2015-12-01 [PMID: 25580573] (WB, Rat)

More publications at http://www.novusbio.com/NB110-41487

Procedures

Western Blot protocol for DGAT1 Antibody (NB110-41487)

Western Blot Protocol

1. Perform SDS-PAGE on samples to be analyzed, loading 40 ug of total protein per lane.
2. Transfer proteins to membrane according to the instructions provided by the manufacturer of the membrane and transfer apparatus.
3. Stain according to standard Ponceau S procedure (or similar product) to assess transfer success, and mark molecular weight standards where appropriate.
4. Rinse the blot.
5. Block the membrane using standard blocking buffer for at least 1 hour.
6. Wash the membrane in wash buffer three times for 10 minutes each.
7. Dilute primary antibody in blocking buffer and incubate 1 hour at room temperature.
8. Wash the membrane in wash buffer three times for 10 minutes each.
9. Apply the diluted HRP conjugated secondary antibody in blocking buffer (as per manufacturers instructions) and incubate 1 hour at room temperature.
10. Wash the blot in wash buffer 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 manufacturers instructions.

Note: Tween-20 can be added to the blocking or antibody dilution buffer at a final concentration of 0.05-0.2%.

*The above information is only intended as a guide. The researcher should determine what protocol best meets their needs. Please follow safe laboratory procedures.

Immunocytochemistry/Immunofluorescence protocol for DGAT1 Antibody (NB110-41487)

Immunocytochemistry Protocol

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

1. Remove culture medium and add 10% formalin to the dish. Fix at room temperature for 30 minutes.
2. Remove the formalin and add ice cold methanol. Incubate for 5-10 minutes.
3. Remove methanol and add washing solution (i.e. PBS). Be sure to not let the specimen dry out. Wash three times for 10 minutes.
4. To block nonspecific antibody binding incubate in 10% normal goat serum from 1 hour to overnight at room temperature.
5. Add primary antibody at appropriate dilution and incubate at room temperature from 2 hours to overnight at room temperature.
6. Remove primary antibody and replace with washing solution. Wash three times for 10 minutes.
7. Add secondary antibody at appropriate dilution. Incubate for 1 hour at room temperature.
8. Remove antibody and replace with wash solution, then wash for 10 minutes. Add Hoechst 33258 to wash solution at 1:25,0000 and incubate for 10 minutes. Wash a third time for 10 minutes.
9. Cells can be viewed directly after washing. The plates can also be stored in PBS containing Azide covered in Parafilm (TM). Cells can also be cover-slipped using Fluoromount, with appropriate sealing.

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Products Related to NB110-41487

HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control
NB110-41487R	DGAT1 Antibody [DyLight 550]

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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