

Product Datasheet

DGAT1 Antibody NB100-57086

Unit Size: 0.1 mg

Store at -20C. Avoid freeze-thaw cycles.

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NB100-57086

DGAT1 Antibody

Product Information	
Unit Size	0.1 mg
Concentration	0.5 mg/ml
Storage	Store at -20C. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	Tris saline (20 mM Tris pH 7.3, 150 mM NaCl), 0.5% BSA
Target Molecular Weight	55.3 kDa

Product Description	
Description	Novus Biologicals Goat DGAT1 Antibody (NB100-57086) is a polyclonal antibody validated for use in IHC, WB, ELISA, Flow and ICC/IF. Anti-DGAT1 Antibody: Cited in 10 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Goat
Gene ID	8694
Gene Symbol	DGAT1
Species	Human, Mouse
Reactivity Notes	Mouse reactivity reported in scientific literature (PMID: 25714675).
Immunogen	Peptide with sequence C-QNSMKPFKDM DYS corresponding to internal region according to NP_036211.1.

Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Peptide ELISA
Recommended Dilutions	Western Blot 0.01 - 0.1 ug/mL, Flow Cytometry 10 ug/mL, Immunohistochemistry, Immunocytochemistry/ Immunofluorescence 10 ug/mL, Immunohistochemistry-Paraffin 3.75 ug/mL, Peptide ELISA Detection limit 1:64000
Application Notes	WB: Approx. 55 kDa band observed in human liver lysates (calculated MW of 55.3 kDa band according to NP_036211.1).



Images

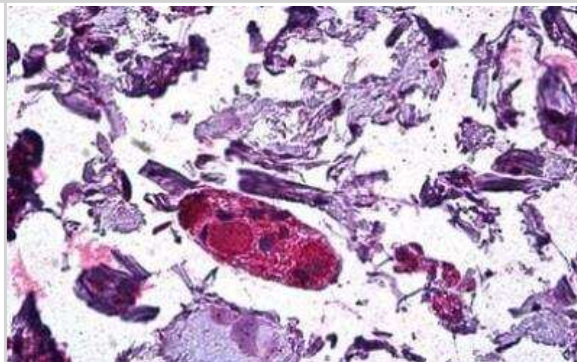
Western Blot: DGAT1 Antibody [NB100-57086] - Staining of Mouse Liver lysate (35 ug protein in RIPA buffer). Antibody at 0.03 ug/mL. Detected by chemiluminescence.

250kDa
150kDa
100kDa
75kDa
50kDa
37kDa
25kDa
20kDa
15kDa

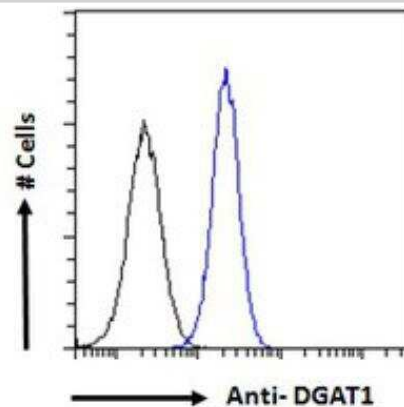
Immunocytochemistry/Immunofluorescence: DGAT1 Antibody [NB100-57086] - Immunofluorescence analysis of paraformaldehyde fixed A431 cells, permeabilized with 0.15% Triton. Primary incubation 1hr (10 ug/mL) followed by Alexa Fluor 488 secondary antibody (2 ug/mL), showing endoplasmic reticulum and cytoplasmic staining. The nuclear stain is DAPI (blue). Negative control: Unimmunized goat IgG (10 ug/mL) followed by Alexa Fluor 488 secondary antibody (2 ug/mL).



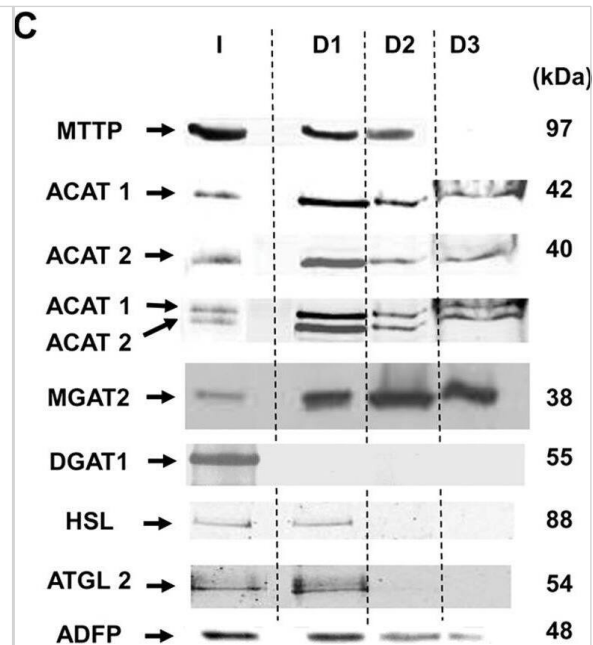
Immunohistochemistry-Paraffin: DGAT1 Antibody [NB100-57086] - Staining of paraffin embedded Human Colon. Antibody at 3.75 ug/mL. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.



Flow Cytometry: DGAT1 Antibody [NB100-57086] - Flow cytometric analysis of paraformaldehyde fixed A431 cells (blue line), permeabilized with 0.5% Triton. Primary incubation 1hr (10 ug/mL) followed by Alexa Fluor 488 secondary antibody (1 ug/mL). IgG control: Unimmunized goat IgG (black line) followed by Alexa Fluor 488 secondary antibody.



Lipidomic analysis. Intestinal LD contains TAG but also DAG, MAG and FFA and lipid metabolizing enzymes A) TLC analysis of neutrals lipids from initial homogenate (I), the LD D1, D2 and D3, the fraction M containing microsomes and membrane and the last infranatant (S). Lipids were stained using 25% H₂SO₄ and heated what led to stain in blue free (FC) and esterified (EC) cholesterols and in brown free fatty acids (FFA), monoacylglycerol (MAG), diacylglycerol (DAG, either 1,2 DAG or 1,3 DAG) and triacylglycerol (TAG). Sample volumes were adapted to permit concomitant lipid visualization in a unique thin layer. S was almost exempt of lipids even after concentration. B) Acyl esterase assay were performed with equivalent samples of D1, D2 and D3. Lipids were extracted, separated by TLC, stained with iodine vapor. The bands corresponding to FFA, MAG, DAG and TAG were scrapped and the incorporated radio-activity was quantified by liquid scintillation counting. Data are expressed in means of 103 dpm/equivalent sample +/- SEM, n = 3 separate experiments. C) Immunodetection of ADFP (adipocyte differentiation-related protein), MTTP (microsomal triglyceride transfer protein), ACAT1 and ACAT2 (acetyl-CoA cholesterol acyl transferase), MGAT2 (monoacyl glycerol acyl transferase 2), HSL (Hormone sensitive lipase) and ATGL (adipose triglyceride lipase). ACAT1 and ACAT2 were selectively detected in distinct bands that are clearly distinguished after co-incubation with anti-ACAT1 and anti-ACAT2 antibodies. For each sample, equivalent amounts of proteins (60ug) were subjected to SDS-PAGE and transferred on nitrocellulose membrane. All data in the figure are representative of 3 separate experiments. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/23560035>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

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]

Melissa L. Erickson, Zachary W. Patinkin, Allison M. Duensing, Dana Dabelea, Leanne M. Redman, Kristen E. Boyle Maternal metabolic health drives mesenchymal stem cell metabolism and infant fat mass at birth *JCI Insight* 2021-07-08 [PMID: 34061777]

Timothy M. Moore, Zhenqi Zhou, Alexander R. Strumwasser, Whitaker Cohn, Amanda J. Lin, Kevin Cory, Kate Whitney, Theodore Ho, Timothy Ho, Joseph L. Lee, Daniel H. Rucker, Austin N. Hoang, Kevin Widjaja, Aaron D. Abrishami, Sarada Charugundla, Linsey Stiles, Julian P. Whitelegge, Lorraine P. Turcotte, Jonathan Wanagat, Andrea L. Hevener Age-induced mitochondrial DNA point mutations are inadequate to alter metabolic homeostasis in response to nutrient challenge *Aging Cell* 2020-10-13 [PMID: 33049094]

Chaves AB, Zheng D, Johnson JA et al. Infant Mesenchymal Stem Cell Insulin Action is Associated With Maternal Plasma Free Fatty Acids, Independent of Obesity Status: The Healthy Start Study *Diabetes* 2022-05-27 [PMID: 35621990]

Bagnato C, Igal RA. Overexpression of diacylglycerol acyltransferase-1 reduces phospholipid synthesis, proliferation, and invasiveness in simian virus 40-transformed human lung fibroblasts. *J Biol Chem* 2003-12-26 [PMID: 14557275]

Borsting Jordy A, Kraakman MJ, Gardner T et al. Analysis of the liver lipidome reveals insights into the protective effect of exercise on high fat diet induced hepatosteatosis in mice *Am. J. Physiol. Endocrinol. Metab.* 2015-02-24 [PMID: 25714675] (WB, Mouse)

Seyer A, Cantiello M, Bertrand-Michel J et al. Lipidomic and Spatio-Temporal Imaging of Fat by Mass Spectrometry in Mice Duodenum during Lipid Digestion *PLoS One* 2013-01-01 [PMID: 23560035] (WB, Mouse)

van Diepen JA, Stienstra R, Vroegrijk IO et al. Caspase-1 deficiency in mice reduces intestinal triglyceride absorption and hepatic triglyceride secretion. *J Lipid Res* 2013-02-01 [PMID: 23160218]

Amati F, Dube JJ, Alvarez-Carnero E et al. Skeletal muscle triglycerides, diacylglycerols, and ceramides in insulin resistance: another paradox in endurance-trained athletes? *Diabetes* 2011-10-01 [PMID: 21873552] (WB, Human)

Alsted TJ, Nybo L, Schweiger M et al. Adipose triglyceride lipase in human skeletal muscle is upregulated by exercise training. *Am J Physiol Endocrinol Metab*;296(3):E445-453. 2009-01-01 [PMID: 19106247]



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Products Related to NB100-57086

NB820-59212	Human Duodenum Whole Tissue Lysate (Adult Whole Normal)
NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF017	Rabbit anti-Goat IgG Secondary Antibody [HRP (Horseradish Peroxidase)]
HAF109	Donkey anti-Goat IgG Secondary Antibody [HRP (Horseradish Peroxidase)]
NB410-28088-1mg	Goat 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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