

Product Datasheet

Abhd5 Antibody (1F3) - Azide and BSA Free H00051099-M01

Unit Size: 0.1 mg

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

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H00051099-M01

Abhd5 Antibody (1F3) - Azide and BSA Free

Product Information	
Unit Size	0.1 mg
Concentration	Concentrations vary lot to lot. See vial label for concentration. If unlisted please contact technical services.
Storage	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	1F3
Preservative	No Preservative
Isotype	IgG2a Kappa
Purity	IgG purified
Buffer	In 1x PBS, pH 7.4

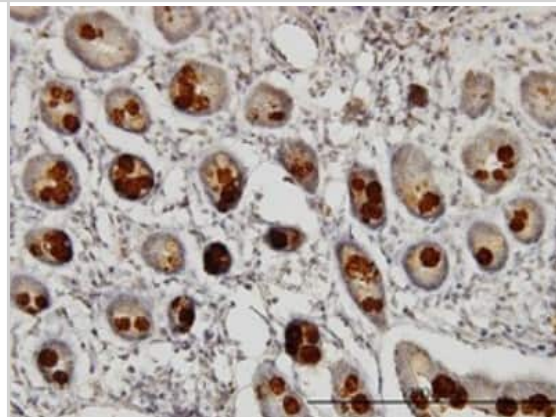
Product Description	
Description	Novus Biologicals Knockout (KO) Validated Mouse Abhd5 Antibody (1F3) - Azide and BSA Free (H00051099-M01) is a monoclonal antibody validated for use in IHC, WB, ELISA, ICC/IF and CHIP. Anti-Abhd5 Antibody: Cited in 35 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Mouse
Gene ID	51099
Gene Symbol	ABHD5
Species	Human, Mouse, Rat, Bovine, Monkey
Reactivity Notes	Mouse reactivity reported in multiple pieces of scientific literature
Specificity/Sensitivity	ABHD5 - abhydrolase domain containing 5
Immunogen	ABHD5 (AAH21958, 1 a.a. ~ 349 a.a) full-length recombinant protein with GST tag. MW of the GST tag alone is 26 KDa. MAAEVEEVDSDTGERSGWLTGWLPTWCPTSISHLKEAEEKMLKCVPCYKKEPVRISNGNKIWTLKFSHNISNKTPLVLLHGFGGGLGLWALNFGDLCTNRPVYAFDLLGFGRSSRPRFDSDAEEVENQFVESIEEWRCALGLDKMILLGHNLGGFLAAAYSLKYPSRVNHLILVEPWGFPERPDADQDRPIPVWIRALGAALTPFNPLAGLRIAGPFGLSLVQRLRPDFKRKYSSMFEDDTVTEYIYHCNVQTPSGETAFAKNTIPYGWAKRPMLQRIGKMHPDIPVSVIFGARSCIDGNSGTSIQSLRPHSYVKTIALGAGHYVYADQPEEFNQKVKKEICDTVD
Notes	This product is produced by and distributed for Abnova, a company based in Taiwan.

Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, ELISA, Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Knockout Validated
Recommended Dilutions	Western Blot 1:500, ELISA 1:100-1:2000, Immunohistochemistry 1:10-1:500, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry-Paraffin 1:10-1:500, Knockout Validated
Application Notes	Antibody reactive against cell, tissue and transfected lysate for Western Blot. Has also been used for immunohistochemistry (paraffin) and ELISA. Knock Out Validation was reported in scientific literature (PMID: 27559856). Use in Immunocytochemistry/immunofluorescence reported in scientific literature (PMID: 25894224).

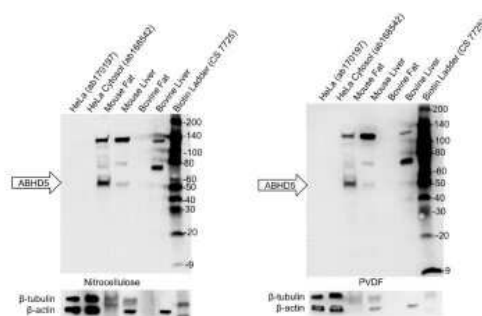


Images

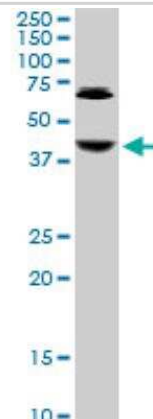
Immunohistochemistry-Paraffin: Abhd5 Antibody (1F3) [H00051099-M01] - Analysis of monoclonal antibody to ABHD5 on formalin-fixed paraffin-embedded human small Intestine. Antibody concentration 3 ug/ml.



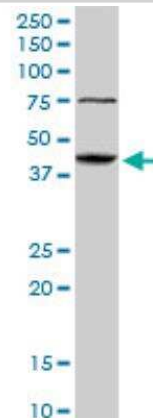
Western Blot: Abhd5 Antibody (1F3) [H00051099-M01] - ABHD5 expression in HeLa, mouse and bovine tissues. Primary: 1:500 dilution. This image was submitted via customer Review.



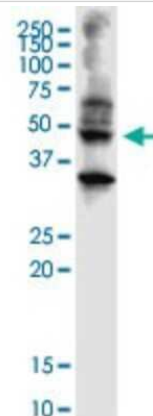
Western Blot: Abhd5 Antibody (1F3) [H00051099-M01] - Western Blot analysis of ABHD5 expression in Jurkat (Cat # L017V1).



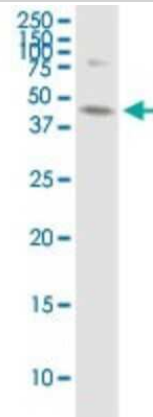
Western Blot: Abhd5 Antibody (1F3) [H00051099-M01] - Western Blot analysis of ABHD5 expression in human liver.



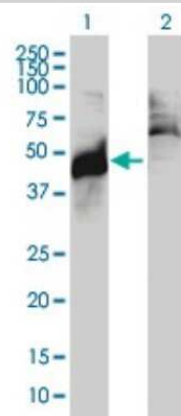
Western Blot: Abhd5 Antibody (1F3) [H00051099-M01] - ABHD5 monoclonal antibody (M01), clone 1F3. Analysis of ABHD5 expression in HeLa.



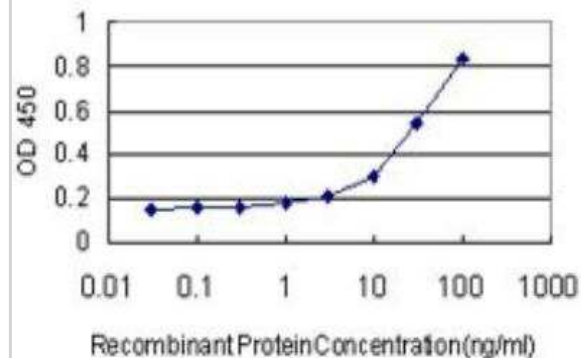
Western Blot: Abhd5 Antibody (1F3) [H00051099-M01] - ABHD5 monoclonal antibody (M01), clone 1F3. Analysis of ABHD5 expression in rat testis.



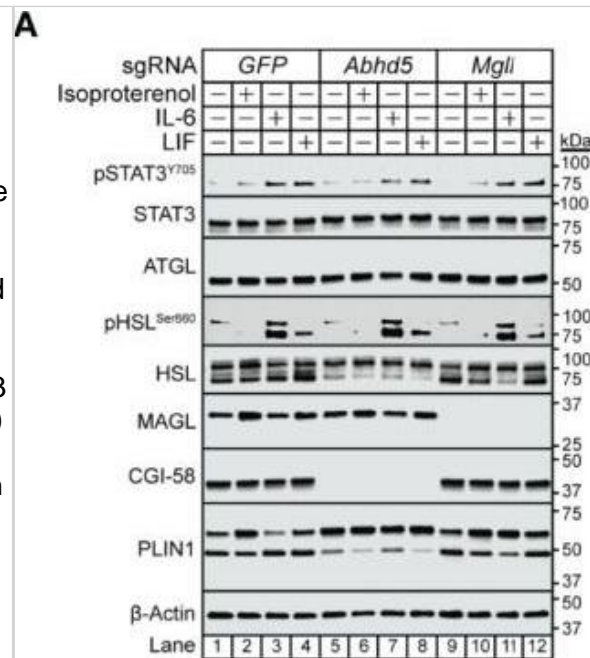
Western Blot: Abhd5 Antibody (1F3) [H00051099-M01] - Analysis of ABHD5 expression in transfected 293T cell line by ABHD5 monoclonal antibody (M01), clone 1F3. Lane 1: ABHD5 transfected lysate (39 kDa). Lane 2: Non-transfected lysate.



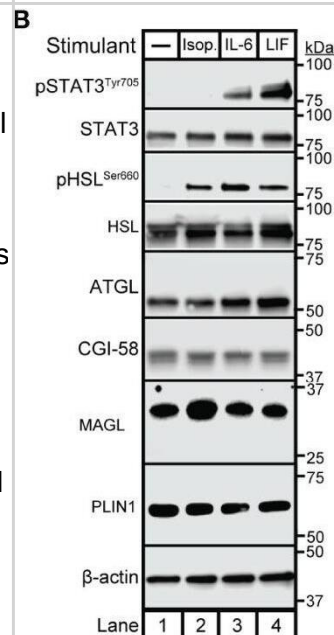
ELISA: Abhd5 Antibody (1F3) [H00051099-M01] - Detection limit for recombinant GST tagged ABHD5 is approximately 1 ng/ml as a capture antibody.



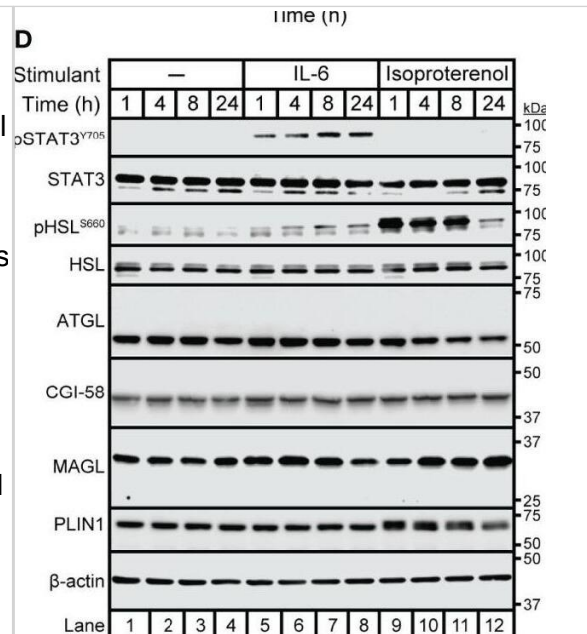
The Role of MAGL and CGI-58 in IL-6 and β -adrenergic Adipocyte Signaling and Lipolysis. (A-D) Pre-adipocytes in a 12-well format were infected with lentivirus containing Cas9 and sgGFP (black), sgAbhd5 (red), or sgMgll (blue) followed by differentiation as described in Methods. On day 8, differentiated adipocytes were treated in a final volume of 1 ml of medium D with 3 μ l DMSO and 3 μ l PBS containing the indicated concentration of isoproterenol (A, B), IL-6 (A, C), or LIF (A, D). After incubation for 24 hours, medium was collected and processed to measure concentrations of glycerol (left panel) or NEFA (right panel) and adipocytes were harvested and processed for immunoblot analysis (A) with the indicated antibodies as described in Methods. Glycerol levels are shown relative to the average 300 nM isoproterenol condition (B, 653 μ M), 3 nM IL-6 condition (C, 109 μ M), or 0.3 nM LIF condition (D, 55 μ M) of the sgGFP-treated adipocytes. NEFA levels are shown relative to the average 300 nM isoproterenol condition (B, 282 μ M), 3 nM IL-6 condition (C, 70 μ M), or 1 nM LIF condition (D, 21 μ M) of the sgGFP-treated adipocytes. Data is shown as mean \pm SEM of three wells. P value calculated by using a two-way repeated measures ANOVA between sgGFP and the indicated sgRNA conditions. These results were confirmed in at least three independent experiments. Not significant (n.s.). Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/35785158>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



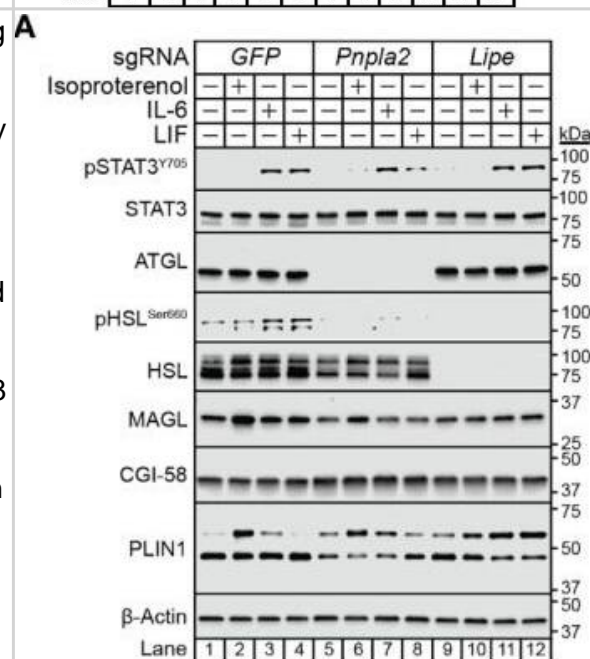
Comparison of IL-6 Family Cytokine and β -adrenergic Adipocyte Signaling and Lipolysis. (A–D) Differentiated adipocytes in a 12-well format were treated in a final volume of 1 ml of medium D with 3 μ l DMSO and 3 μ l PBS in the absence or presence of 300 nM isoproterenol (black, Isop.), 3 nM IL-6 (red), or 0.3 nM LIF (blue). After incubation (37C, 10% CO₂) for either 24 hours (A, B) or the indicated time (C, D), medium was collected and processed to measure concentrations of NEFA (A, C; top panels) or glycerol (A,C; bottom panels), and adipocytes were harvested and processed for immunoblot analysis (B, D) with the indicated antibody as described in Methods. Data is shown as mean \pm SEM of three wells. * $p < 0.05$, ** $p < 0.01$, or **** $p < 0.0001$ based on one-way ANOVA followed by Dunnett's multiple comparison test to compare each condition to the vehicle condition (A) or two-way ANOVA followed by Šidak's multiple comparison test to compare isoproterenol to IL-6 conditions at matched time points (B). These results were confirmed in at least three independent experiments. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/35785158>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



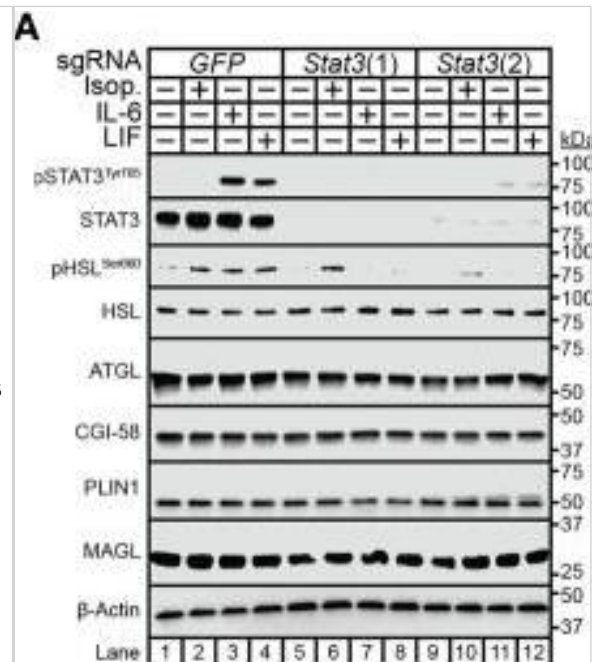
Comparison of IL-6 Family Cytokine and β -adrenergic Adipocyte Signaling and Lipolysis. (A–D) Differentiated adipocytes in a 12-well format were treated in a final volume of 1 ml of medium D with 3 μ l DMSO and 3 μ l PBS in the absence or presence of 300 nM isoproterenol (black, Isop.), 3 nM IL-6 (red), or 0.3 nM LIF (blue). After incubation (37C, 10% CO₂) for either 24 hours (A, B) or the indicated time (C, D), medium was collected and processed to measure concentrations of NEFA (A, C; top panels) or glycerol (A,C; bottom panels), and adipocytes were harvested and processed for immunoblot analysis (B, D) with the indicated antibody as described in Methods. Data is shown as mean \pm SEM of three wells. * p < 0.05, ** p < 0.01, or **** p < 0.0001 based on one-way ANOVA followed by Dunnett's multiple comparison test to compare each condition to the vehicle condition (A) or two-way ANOVA followed by Šidak's multiple comparison test to compare isoproterenol to IL-6 conditions at matched time points (B). These results were confirmed in at least three independent experiments. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/35785158>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



The Role of ATGL and HSL in IL-6 and β -adrenergic Adipocyte Signaling and Lipolysis. (A–D) Pre-adipocytes in a 12-well format were infected with lentivirus containing Cas9 and sgGFP (black), sgPnpla2 (red), or sgLipe (blue) followed by differentiation as described in Methods. On day 8, differentiated adipocytes were treated in a final volume of 1 ml of medium D with 3 μ l DMSO and 3 μ l PBS containing the indicated concentration of isoproterenol (A, B), IL-6 (A, C), or LIF (A, D). After incubation for 24 hours, medium was collected and processed to measure concentrations of glycerol (left panel) or NEFA (right panel) and adipocytes were harvested and processed for immunoblot analysis (A) with the indicated antibodies as described in Methods. Glycerol levels are shown relative to the average 300 nM isoproterenol condition (B, 578 μ M), 3 nM IL-6 condition (C, 140 μ M), or 1 nM LIF condition (D, 86 μ M) of the sgGFP-treated adipocytes. NEFA levels are shown relative to the average 300 nM isoproterenol condition (B, 123 μ M), 3 nM IL-6 condition (C, 57 μ M), or 1 nM LIF condition (D, 27 μ M) of the sgGFP-treated adipocytes. Data is shown as mean \pm SEM of three wells. P value calculated by using a two-way repeated measures ANOVA between sgGFP and the indicated sgRNA conditions. These results were confirmed in at least three independent experiments. Not significant (n.s.). Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/35785158>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



The Role of STAT3 in IL-6 and β -adrenergic Adipocyte Signaling and Lipolysis. (A–C) Pre-adipocytes in a 12-well format were infected with lentivirus containing Cas9 and the indicated sgRNA as described in Methods. On day 8, differentiated adipocytes were treated in a final volume of 1 ml of medium D with 3 μ l DMSO and 3 μ l PBS containing 300 nM isoproterenol, 3 nM IL-6, or 0.3nM LIF. After incubation for 24 hours, medium was collected and processed to measure concentrations of glycerol (B) or NEFA (C) and adipocytes were harvested and processed for immunoblot analysis (A) with the indicated antibodies as described in Methods. Glycerol release is shown relative to the respective stimulant in the sgGFP condition which were 366 μ M, 70 μ M, and 33 μ M for isoproterenol, IL-6, and LIF, respectively. NEFA release is shown relative to the respective stimulant in the sgGFP condition which were 273 μ M, 137 μ M, and 34 μ M for isoproterenol, IL-6, and LIF, respectively. Data is shown as mean \pm SEM of three wells. * $p < 0.5$, *** $p < 0.001$, or **** $p < 0.0001$ based on two-way ANOVA with Tukey's multiple comparison test for differences in relative glycerol or NEFA release between sgRNA treatments with the same stimulant. These results were confirmed in at least three independent experiments. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/35785158>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Gandhi AY, Yu J, Gupta A et al. Cytokine-Mediated STAT3 Transcription Supports ATGL/CGI-58-Dependent Adipocyte Lipolysis in Cancer Cachexia *Frontiers in Oncology* 2022-06-15 [PMID: 35785158]

Ou J, Miao H, Ma Y et al. Loss of abhd5 promotes colorectal tumor development and progression by inducing aerobic glycolysis and epithelial-mesenchymal transition *Cell Rep* 2015-12-11 [PMID: 25482557]

Y Gu, Y Chen, L Wei, S Wu, K Shen, C Liu, Y Dong, Y Zhao, Y Zhang, C Zhang, W Zheng, J He, Y Wang, Y Li, X Zhao, H Wang, J Tan, L Wang, Q Zhou, G Xie, H Liang, J Ou ABHD5 inhibits YAP-induced c-Met overexpression and colon cancer cell stemness via suppressing YAP methylation *Nature Communications*, 2021-11-18;12(1):6711. 2021-11-18 [PMID: 34795238] (Chromatin Immunoprecipitation, Immunohistochemistry, Western Blot)

Ivan B, Katharina K, Sophie H et al. Off-target effects of the lysosomal acid lipase inhibitors Lalistat-1 and Lalistat-2 on neutral lipid hydrolases. *Mol Metab.* 2022-04-30 [PMID: 35504532]

Wagner C, Hois V, Pajed L et al. Lysosomal acid lipase is the major acid retinyl ester hydrolase in cultured human hepatic stellate cells but not essential for retinyl ester degradation. *Biochim Biophys Acta Mol Cell Biol Lipids* . 2020-05-01 [PMID: 32361002]

Yang P, Wang Y, Tang W et al. Western diet induces severe nonalcoholic steatohepatitis, ductular reaction, and hepatic fibrosis in liver CGI-58 knockout mice. *Sci Rep.* 2020-03-13 [PMID: 32170127]

Gabrielle V, Isabelle R, Arnaud C et al. The ATGL Lipase Cooperates With ABHD5 to Mobilize Lipids for Hepatitis C Virus Assembly. *PLoS Pathog.* 2020-06-15 [PMID: 32542055]

Alexander Y, Emilio M, Ljiljana M et al. Dynamic interactions of ABHD5 with PNPLA3 regulate triacylglycerol metabolism in brown adipocytes. *Nat Metab.* 2019-05-06 [PMID: 31497752]

Korbelius M, Vujic N, Sachdev V et al. ATGL/CGI-58-Dependent Hydrolysis of a Lipid Storage Pool in Murine Enterocytes. *Cell Rep.* 2019-08-13 [PMID: 31412256]

Talbott HA, Plewes MR, Krause C et al. Formation and characterization of lipid droplets of the bovine corpus luteum *Sci Rep* 2020-07-09 [PMID: 32647143] (WB, Bovine)

Shang S, Ji X, Zhang L et al. Macrophage ABHD5 suppresses NF-kappa B-dependent matrix metalloproteinase expression and cancer metastasis *Cancer Res.* 2019-08-22 [PMID: 31439546] (ICC/IF, WB, Mouse)

Ou J, Peng Y, Yang W et al. ABHD5 blunts the sensitivity of colorectal cancer to fluorouracil via promoting autophagic uracil yield. *Nat Commun.* 2019-03-06 [PMID: 30842415]

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NBP1-96981-0.5mg	Mouse IgG2a Kappa Isotype Control (M2AK)

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