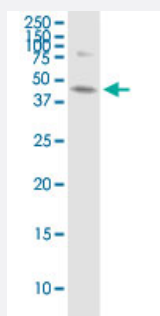


ABHD5 monoclonal antibody (M01), clone 1F3

Catalog # H00051099-M01

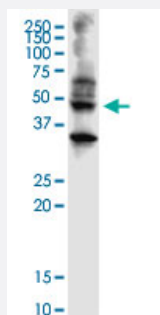
Size 100 ug

Applications



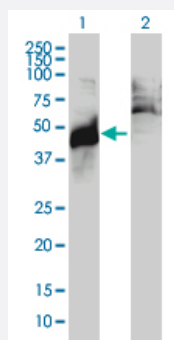
Western Blot (Tissue lysate)

ABHD5 monoclonal antibody (M01), clone 1F3. Western Blot analysis of ABHD5 expression in rat testis.



Western Blot (Cell lysate)

ABHD5 monoclonal antibody (M01), clone 1F3. Western Blot analysis of ABHD5 expression in HeLa.

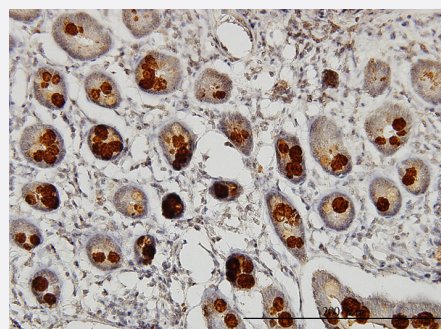


Western Blot (Transfected lysate)

Western Blot 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.

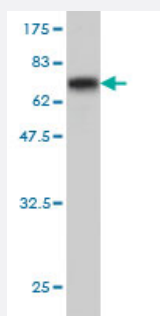
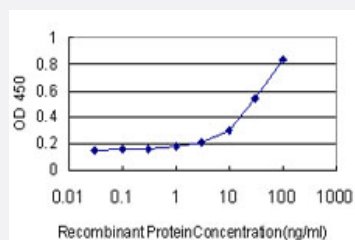


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunoperoxidase of monoclonal antibody to ABHD5 on formalin-fixed paraffin-embedded human small Intestine. [antibody concentration 3 ug/ml]

Sandwich ELISA (Recombinant protein)

Detection limit for recombinant GST tagged ABHD5 is approximately 1ng/ml as a capture antibody.



Western Blot detection against Immunogen (64.13 KDa) .

Specification

Product Description	Mouse monoclonal antibody raised against a full length recombinant ABHD5.
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.
Sequence	MAAEEEEVDSADTGERSGWLTGWLPTWCPTSISHLKEAEEKMLKCVPCITYKKEPVRIISNGNKM TLKFSHNISKNTPLVLLHGFGGGLGLWALNFGDLCTNRPVYAFDLLGFGRSSRPRFSDAESEVEN QFVESIEEWRCALGLDKMILLGHNLGGLAAAYSLKYPSRVNHLILVEPWGFPERPDADQDRPIP VWIRALGAALTPFNPLAGLRIAGPFGSLVQRLRPDFKRKYSSMFEDDTVTEYHYHCNVQTPSGET AFKNMTIPYGWAKRPMQLRIGKMHPDIPVSVIFGARSCIDGNSGTSIQSLRPHSYVKTAILGAGHYV YADQPEEFNQKVKEICDVT
Host	Mouse
Reactivity	Human, Rat
Interspecies Antigen Sequence	Mouse (94); Rat (94)
Isotype	IgG2a Kappa
Quality Control Testing	Antibody Reactive Against Recombinant Protein. Western Blot detection against Immunogen (64.13 KDa) .
Storage Buffer	In 1x PBS, pH 7.4

Storage Instruction

Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.

Applications

- Western Blot (Tissue lysate)

ABHD5 monoclonal antibody (M01), clone 1F3. Western Blot analysis of ABHD5 expression in rat testis.

[Protocol Download](#)

- Western Blot (Cell lysate)

ABHD5 monoclonal antibody (M01), clone 1F3. Western Blot analysis of ABHD5 expression in HeLa.

[Protocol Download](#)

- Western Blot (Transfected lysate)

Western Blot 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.

[Protocol Download](#)

- Western Blot (Recombinant protein)

[Protocol Download](#)

- Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunoperoxidase of monoclonal antibody to ABHD5 on formalin-fixed paraffin-embedded human small Intestine. [antibody concentration 3 ug/ml]

[Protocol Download](#)

- Sandwich ELISA (Recombinant protein)

Detection limit for recombinant GST tagged ABHD5 is approximately 1ng/ml as a capture antibody.

[Protocol Download](#)

- ELISA

Gene Info — ABHD5

Entrez GeneID	51099
GeneBank Accession#	BC021958
Protein Accession#	AAH21958
Gene Name	ABHD5
Gene Alias	CDS, CGI58, IECN2, MGC8731, NCIE2
Gene Description	abhydrolase domain containing 5
Omim ID	275630 604780
Gene Ontology	Hyperlink
Gene Summary	The protein encoded by this gene belongs to a large family of proteins defined by an alpha/beta hydrolase fold, and contains three sequence motifs that correspond to a catalytic triad found in the esterase/lipase/thioesterase subfamily. It differs from other members of this subfamily in that its putative catalytic triad contains an asparagine instead of the serine residue. Mutations in this gene have been associated with Chanarin-Dorfman syndrome, a triglyceride storage disease with impaired long-chain fatty acid oxidation. [provided by RefSeq]
Other Designations	-

Publication Reference

- [Off-target effects of the lysosomal acid lipase inhibitors Lalistat-1 and Lalistat-2 on neutral lipid hydrolases.](#)

Ivan Bradić, Katharina B Kuentzel, Sophie Honeder, Gernot F Grabner, Nemanja Vujić, Robert Zimmermann, Ruth Birner-Gruenberger, Dagmar Kratky.

Molecular Metabolism 2022 Jul; 61:101510.

Application: WB-Ce, African green monkey, COS-7 cells

- [The ATGL Lipase Cooperates With ABHD5 to Mobilize Lipids for Hepatitis C Virus Assembly.](#)

Gabrielle Vieyres, Isabelle Reichert, Arnaud Carpentier, Florian W R Vondran, Thomas Pietschmann.

PLoS Pathogens 2020 Jun; 16(6):e1008554.

Application: WB-Tr, Human, Lunet N hCD81 cells

- [Lysosomal acid lipase is the major acid retinyl ester hydrolase in cultured human hepatic stellate cells but not essential for retinyl ester degradation.](#)

Wagner C, Hois V, Pajed L, Pusch LM, Wolinski H, Trauner M, Zimmermann R, Taschler U, Lass A.

Biochimica et Biophysica Acta 2020 Aug; 1865(8):158730.

Application: WB-Ce, Human, LX-2 cells

- [Western diet induces severe nonalcoholic steatohepatitis, ductular reaction, and hepatic fibrosis in liver CGI-58 knockout mice.](#)
Yang P, Wang Y, Tang W, Sun W, Ma Y, Lin S, Jing J, Jiang L, Shi H, Song Z, Yu L.
Scientific Reports 2020 Mar; 10(1):4701.
Application: WB-Ti, WB-Tr, Human, Mouse, Huh7 cells, Mouse livers
- [ATGL/CGI-58-Dependent Hydrolysis of a Lipid Storage Pool in Murine Enterocytes.](#)
Korbelius M, Vujic N, Sachdev V, Obrowsky S, Rainer S, Gottschalk B, Graier WF, Kratky D.
Cell Reports 2019 Aug; 28(7):1923.
Application: WB, Mouse, Mouse enterocytes
- [Dynamic interactions of ABHD5 with PNPLA3 regulate triacylglycerol metabolism in brown adipocytes.](#)
Alexander Yang, Emilio P Mottillo, Ljiljana Mladenovic-Lucas, Li Zhou, James G Granneman.
Nature Metabolism 2019 May; 1(5):560.
Application: WB, Mouse, Mouse brown adipose tissue, liver
- [ABHD5 blunts the sensitivity of colorectal cancer to fluorouracil via promoting autophagic uracil yield.](#)
Ou J, Peng Y, Yang W, Zhang Y, Hao J, Li F, Chen Y, Zhao Y, Xie X, Wu S, Zha L, Luo X, Xie G, Wang L, Sun W, Zhou Q, Li J, Liang H.
Nature Communications 2019 Mar; 10(1):1078.
Application: IF, WB, Human, SW480 cells
- [Loss of Abhd5 Promotes Colorectal Tumor Development and Progression by Inducing Aerobic Glycolysis and Epithelial-Mesenchymal Transition.](#)
Ou J, Miao H, Ma Y, Guo F, Deng J, Wei X, Zhou J, Xie G, Shi H, Xue B, Liang H, Yu L.
Cell Reports 2018 Sep; 24(10):2795.
Application: WB-Ce, WB-Tr, Human, HCT116, LS174T, SW620, SW480, HT-29, LoVo, RKO, FHC, FHC KD cells
- [Stimulation of white adipose tissue lipolysis by xenin, a neurotensin-related peptide.](#)
Bhavya S, Lew PS, Mizuno TM.
Biochemical and Biophysical Research Communications 2018 Apr; 498(4):842.
Application: WB, Mouse, White adipose tissue
- [Lipolysis in Brown Adipocytes Is Not Essential for Cold-Induced Thermogenesis in Mice.](#)
Shin H, Ma Y, Chanturiya T, Cao Q, Wang Y, Kadegowda AKG, Jackson R, Rumore D, Xue B, Shi H, Gavrilova O, Yu L.
Cell Metabolism 2017 Nov; 26(5):764.
Application: WB-Ti, Mouse, Mouse brown adipose tissues

- [Central action of xenin affects the expression of lipid metabolism-related genes and proteins in mouse white adipose tissue.](#)

Bhavya S, Lew PS, Mizuno TM.

Neuropeptides 2017 Feb; [Epub].

Application: WB-Ti, Mouse, Mouse white adipose tissue

- [G0/G1 switch gene-2 regulates cardiac lipolysis.](#)

Heier C, Radner FP, Moustafa T, Schreiber R, Grond S, Eichmann TO, Schweiger M, Schmidt A, Cerik IK, Oberer M, Theussl HC, Wojciechowski J, Penninger JM, Zimmermann R, Zechner R.

The Journal of Biological Chemistry 2015 Oct; 290(43):26141.

Application: WB-Tr, Mouse, Heart

- [Fatty acid-binding proteins interact with comparative gene identification-58 linking lipolysis with lipid ligand shuttling.](#)

Hofer P, Boeszoermenyi A, Jaeger D, Feiler U, Arthanari H, Mayer N, Zehender F, Rechberger G, Oberer M, Zimmermann R, Lass A, Haemmerle G, Breinbauer R, Zechner R, Preiss-Landl K.

The Journal of Biological Chemistry 2015 Jul; 290(30):18438.

Application: IP-WB, Mouse, White adipose tissue

- [The Hepatitis C Virus Core Protein Inhibits Adipose Triglyceride Lipase \(ATGL\)-mediated Lipid Mobilization and Enhances the ATGL Interaction with Comparative Gene Identification 58 \(CGI-58\) and Lipid Droplets.](#)

Camus G, Schweiger M, Herker E, Harris C, Kondratowicz AS, Tsou CL, Farese RV Jr, Herath K, Previs SF, Roddy TP, Pinto S, Zechner R, Ott M.

The Journal of Biological Chemistry 2014 Dec; 289(52):35770.

Application: WB-Ce, WB-Tr, Human, Monkey, Cos-7, Huh7 cells

- [Perilipins 2 and 3 lack a carboxy-terminal domain present in perilipin 1 involved in sequestering ABHD5 and suppressing basal lipolysis.](#)

Patel S, Yang W, Kozusko K, Saudek V, Savage DB.

PNAS 2014 Jun; 111(25):9163.

Application: WB-Tr, Mouse, Monkey, 3T3-L1 adipocytes, COS-7 cells

- [microRNA-29 fine-tunes the expression of key FOXA2-activated lipid metabolism genes and is dysregulated in animal models of insulin resistance and diabetes.](#)

Kurtz CL, Peck BC, Fannin EE, Beysen C, Miao J, Landstreet SR, Ding S, Turaga V, Lund PK, Turner S, Biddinger SB, Vickers KC, Sethupathy P.

Diabetes 2014 Sep; 63(9):3141.

Application: WB-Tr, Human, Huh7 cells

- [Endurance Exercise Training Up-Regulates Lipolytic Proteins and Reduces Triglyceride Content in Skeletal Muscle of Obese Subjects.](#)

Louche K, Badin PM, Montastier E, Laurens C, Bourlier V, de Glisezinski I, Thalamas C, Viguerie N, Langin D, Moro C.
The Journal of Clinical Endocrinology and Metabolism 2013 Dec; 98(12):4863.

Application: WB-Ti, Human, Skeletal muscle

- [Downregulation of adipose triglyceride lipase in the heart aggravates diabetic cardiomyopathy in db/db mice.](#)

Inoue T, Kobayashi K, Inoguchi T, Sonoda N, Maeda Y, Hirata E, Fujimura Y, Miura D, Hirano K, Takayanagi R.
Biochemical and Biophysical Research Communications 2013 Aug; 438(1):224.

Application: WB-Ti, Mouse, Mouse hearts

- [Deficiency of Liver Comparative Gene Identification-58 \(CGI-58\) Causes Steatohepatitis and Fibrosis in Mice.](#)

Guo F, Ma Y, Kadegowda AK, Xie P, Liu G, Liu X, Miao H, Ou J, Su X, Zheng Z, Xue B, Shi H, Yu L.
Journal of Lipid Research 2013 Aug; 54(8):2109.

Application: WB-Ti, Mouse, Liver, Lung, Brain, Spleen, BAT, Kidney, Heart, WAT

- [Cardiac-specific overexpression of perilipin 5 provokes severe cardiac steatosis via the formation of a lipolytic barrier.](#)

Pollak NM, Schweiger M, Jaeger D, Kolb D, Kumari M, Schreiber R, Kolleritsch S, Markolin P, Grabner GF, Heier C, Zierler KA, Rulicke T, Zimmermann R, Lass A, Zechner R, Haemmerle G.
Journal of Lipid Research 2013 Jan; 54(4):1092.

Application: WB-Tr, Mouse, Mouse cardiac muscle

- [PNPLA1 mutations cause autosomal recessive congenital ichthyosis in golden retriever dogs and humans.](#)

Grall A, Guaguere E, Planchais S, Grond S, Bourrat E, Hausser I, Hitte C, Le Gallo M, Derbois C, Kim GJ, Lagoutte L, Degorce-Rubiales F, Radner FP, Thomas A, Kury S, Bensignor E, Fontaine J, Pin D, Zimmermann R, Zechner R, Lathrop M, Galibert F, Andre C, Fischer J.
Nature Genetics 2012 Jan; 44(2):140.

Application: WB-Ce, Human, Keratinocyte

- [Liver X Receptor \(LXR\) Regulates Human Adipocyte Lipolysis.](#)

Stenson BM, Ryden M, Venteclef N, Dahlman I, Pettersson AM, Mairal A, Astrom G, Blomqvist L, Wang V, Jocken JW, Clement K, Langin D, Arner P, Laurencikiene J.
The Journal of Biological Chemistry 2011 Jan; 286(1):370.

Application: WB, Human, Adipocytes

- [B56{alpha}/Protein Phosphatase 2A Inhibits Adipose Lipolysis in High-Fat Diet-Induced Obese Mice.](#)

Kinney BP, Qiao L, Levaugh JM, Shao J.

Endocrinology 2010 Aug; 151(8):3624.

Application: WB-Ti, Mouse, Mouse adipose tissues