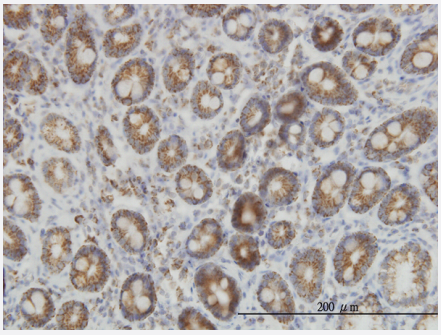
IDH2 monoclonal antibody (M01), clone 5F11

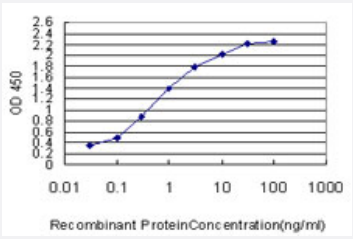
Catalog # H00003418-M01 Size 100 ug

Applications



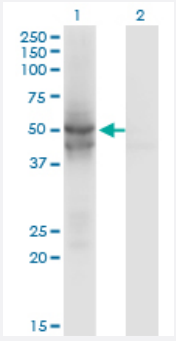
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunoperoxidase of monoclonal antibody to IDH2 on formalin-fixed paraffin-embedded human colon. [antibody concentration 3 ug/ml]



Sandwich ELISA (Recombinant protein)

Detection limit for recombinant GST tagged IDH2 is approximately 0.03ng/ml as a capture antibody.



Western Blot (Transfected lysate)

Western Blot analysis of IDH2 expression in transfected 293T cell line by IDH2 monoclonal antibody (M01), clone 5F11.

Lane 1: IDH2 transfected lysate(50.9 KDa).
Lane 2: Non-transfected lysate.

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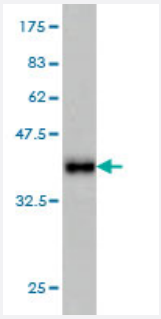

Western Blot detection against Immunogen (36.52 KDa) .

Specification

Product Description	Mouse monoclonal antibody raised against a partial recombinant IDH2.
Immunogen	IDH2 (NP_002159, 354 a.a. ~ 451 a.a) partial recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.
Sequence	HYREHQKGRPTSTNPIASIFAWTRGLEHRGKLDGNQDLIRFAQMLEKVCVETVESGAMTKDLAGCI HGLSNVKLNEHFLNTTDFLDTIKSNLDRALGR
Host	Mouse
Reactivity	Human
Interspecies Antigen Sequence	Mouse (97); Rat (97)
Isotype	IgG1 Kappa
Quality Control Testing	Antibody Reactive Against Recombinant Protein. Western Blot detection against Immunogen (36.52 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

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

  Immunoperoxidase of monoclonal antibody to IDH2 on formalin-fixed paraffin-embedded human colon. [antibody concentration 3 ug/ml]

  Protocol Download

- ELISA

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- Sandwich ELISA (Recombinant protein)

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  Protocol Download

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  Western Blot analysis of IDH2 expression in transfected 293T cell line by IDH2 monoclonal antibody (M01), clone 5F11.

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  Protocol Download

- Western Blot (Recombinant protein)

  Protocol Download

Gene Info — IDH2

Entrez GeneID	3418
GeneBank Accession#	NM_002168
Protein Accession#	NP_002159
Gene Name	IDH2
Gene Alias	ICD-M, IDH, IDHM, IDP, IDPM, mNADP-IDH
Gene Description	isocitrate dehydrogenase 2 (NADP+), mitochondrial
Omim ID	147650
Gene Ontology	Hyperlink
Gene Summary	Isocitrate dehydrogenases catalyze the oxidative decarboxylation of isocitrate to 2-oxoglutarate. These enzymes belong to two distinct subclasses, one of which utilizes NAD(+) as the electron acceptor and the other NADP(+). Five isocitrate dehydrogenases have been reported: three NAD(+)-dependent isocitrate dehydrogenases, which localize to the mitochondrial matrix, and two NADP(+)-dependent isocitrate dehydrogenases, one of which is mitochondrial and the other predominantly cytosolic. Each NADP(+)-dependent isozyme is a homodimer. The protein encoded by this gene is the NADP(+)-dependent isocitrate dehydrogenase found in the mitochondria. It plays a role in intermediary metabolism and energy production. This protein may tightly associate or interact with the pyruvate dehydrogenase complex. [provided by RefSeq
Other Designations	NADP+-specific ICDH|isocitrate dehydrogenase, mitochondrial|oxalosuccinate decarboxylase

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Publication Reference

- Beyond glucose: The crucial role of redox signaling in β-cell metabolic adaptation.

  Blanka Holendová., Barbora Šalovská., Štěpánka Benáková., Lydie Plecitá-Hlavatá.

  Metabolism 2024 Dec; 161:156027.

  Application: Western blot, Rat, Pancreatic islets

- Biochemical Background in Mitochondria Affects 2HG Production by IDH2 and ADHFE1 in Breast Carcinoma.

  Jitka Špačková, Klára Gotvaldová, Aleš Dvořák, Alexandra Urbančoková, Kateřina Pospíšilová, David Větvička, Alberto Leguina-Ruzzi, Petra Tesařová, Libor Vítek, Petr Ježek, Katarína Smolková.

  Cancers 2021 Apr; 13(7):1709.

  Application: WB-Tr, Human, Hs578T, MCF-7 cells

- SIRT3 and GCN5L Regulation of NADP+- And NADPH-driven Reactions of Mitochondrial Isocitrate Dehydrogenase IDH2.

  Katarína Smolková, Jitka Špačková, Klára Gotvaldová, Aleš Dvořák, Alena Křenková, Martin Hubálek, Blanka Holendová, Libor Vítek, Petr Ježek.

  Scientific Reports 2020 May; 10(1):8677.

  Application: WB-Tr, Human, HEK 293LTV cells, Purified proteins

- Aconitase 2 inhibits the proliferation of MCF-7 cells promoting mitochondrial oxidative metabolism and ROS/FoxO1-mediated autophagic response.

  Ciccarone F, Di Leo L, Lazzarino G, Maulucci G, Di Giacinto F, Tavazzi B, Ciriolo MR.

  British Journal of Cancer 2020 Jan; 122(2):182.

  Application: WB-Ce, Human, HCC1143, HCC1187, MCF-7, MCF10A, MDA-MB-157, MDA-MB-231, MDA-MB-1187, T-47D cells

- A selective inhibitor of mitofusin 1-βIIPKC association improves heart failure outcome in rats.

  Ferreira JCB, Campos JC, Qvit N, Qi X, Bozi LHM, Bechara LRG, Lima VM, Queliconi BB, Disatnik MH, Dourado PMM, Kowaltowski AJ, Mochly-Rosen D.

  Nature Communications 2019 Jan; 10(1):329.

  Application: WB, Rat, Rat cardiomyocytes

- Decreased expression of ten-eleven translocation 2 protein is associated with progressive disease and death in patients with mucosis fungoides.

  Gambichler T, Mamali K, Patsinakidis N, Moritz R, Mucke M, Skrygan M, Stockfleth E, Stucker M.

  The British Journal of Dermatology 2016 Mar; 174(3):652.

  Application: IHC, Human, T cell lymphomas

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- Altered global methylation and hydroxymethylation status in vulvar lichen sclerosus - further support for epigenetic mechanisms.

  Gambichler T, Terras S, Kreuter A, Skrygan M.

  The British Journal of Dermatology 2014 Mar; 170(3):687.

  Application: IHC, Human, Skin

Pathway

- Biosynthesis of alkaloids derived from histidine and purine
- Biosynthesis of alkaloids derived from ornithine
- Biosynthesis of alkaloids derived from shikimate pathway
- Biosynthesis of alkaloids derived from terpenoid and polyketide
- Biosynthesis of phenylpropanoids
- Biosynthesis of plant hormones
- Biosynthesis of terpenoids and steroids
- Citrate cycle (TCA cycle)
- Glutathione metabolism
- Metabolic pathways
- Reductive carboxylate cycle (CO2 fixation)

Disease

- Astrocytoma
- Blast Crisis
- Brain Neoplasms
- Chronic Disease
- Disease Progression
- Glioma
- Hematologic Diseases

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- Leukemia
- Lung Neoplasms
- Melanoma
- Myelodysplastic Syndromes
- Myeloproliferative Disorders
- Neoplasm Metastasis
- Oligodendroglioma
- Polycythemia Vera
- Primary Myelofibrosis
- Recurrence
- Skin Neoplasms
- Thrombocythemia

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