

IDH2 (B-6): sc-374476

BACKGROUND

IDH2 (isocitrate dehydrogenase 2 (NADP⁺), mitochondrial), also designated NADP⁺-specific ICDH; isocitrate dehydrogenase, mitochondrial; and oxalosuccinate decarboxylase, is a 452 amino acid enzyme encoded by the human gene IDH2. IDH2 belongs to the isocitrate and isopropylmalate dehydrogenases family and contains two nucleotide binding regions. IDH2 is involved in the reduction of NADP⁺ to NADPH and maintains the supply of glutathione (GSH) in mitochondria. It is believed to play a role in intermediary metabolism and energy production. IDH2 also tightly associates with the pyruvate dehydrogenase complex. IDH2 is found in the mitochondrion as a homodimer and can bind one magnesium or manganese ion per subunit.

CHROMOSOMAL LOCATION

Genetic locus: IDH2 (human) mapping to 15q26.1.

SOURCE

IDH2 (B-6) is a mouse monoclonal antibody raised against amino acids 71-110 mapping within an internal region of IDH2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IDH2 (B-6) is available conjugated to agarose (sc-374476 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374476 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374476 PE), fluorescein (sc-374476 FITC), Alexa Fluor[®] 488 (sc-374476 AF488), Alexa Fluor[®] 546 (sc-374476 AF546), Alexa Fluor[®] 594 (sc-374476 AF594) or Alexa Fluor[®] 647 (sc-374476 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-374476 AF680) or Alexa Fluor[®] 790 (sc-374476 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

IDH2 (B-6) is recommended for detection of IDH2 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IDH2 siRNA (h): sc-62487, IDH2 shRNA Plasmid (h): sc-62487-SH and IDH2 shRNA (h) Lentiviral Particles: sc-62487-V.

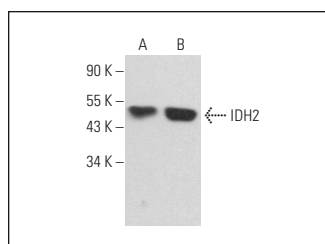
Molecular Weight of IDH2: 44 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224, Hep G2 cell lysate: sc-2227 or DU 145 cell lysate: sc-2268.

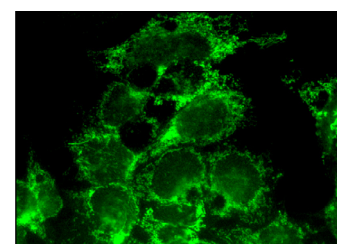
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



IDH2 (B-6): sc-374476. Western blot analysis of IDH2 expression in Caki-1 (A) and Hep G2 (B) whole cell lysates.



IDH2 (B-6): sc-374476. Immunofluorescence staining of formalin-fixed Hep G2 cells showing mitochondrial localization.

SELECT PRODUCT CITATIONS

- Urban-Sosa, V.A., et al. 2019. Isocitrate dehydrogenase type 2 (IDH2) is part of a multiprotein complex for placental steroidogenesis. *Placenta* 87: 30-37.
- Bharath, L.P., et al. 2020. Metformin enhances autophagy and normalizes mitochondrial function to alleviate aging-associated inflammation. *Cell Metab.* 32: 44-55.e6.
- Chung, C., et al. 2020. Integrated metabolic and epigenomic reprogramming by H3K27M mutations in diffuse intrinsic pontine gliomas. *Cancer Cell* 38: 334-349.e9.
- Cai, Z., et al. 2020. Phosphorylation of PDHA by AMPK drives TCA cycle to promote cancer metastasis. *Mol. Cell* 80: 263-278.e7.
- Lee, D., et al. 2020. Dietary schizophyllan reduces mitochondrial damage by activating SIRT3 in mice. *Arch. Pharm. Res.* 43: 449-461.
- Chen, D., et al. 2021. Lysine acetylation restricts mutant IDH2 activity to optimize transformation in AML cells. *Mol. Cell* 81: 3833-3847.e11.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.