SANTA CRUZ BIOTECHNOLOGY, INC.

SMYD2 (F-9): sc-393827

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

SMYD2 (SET and MYND domain containing 2), also known as KMT3C, HSKM-B or ZMYND14, is a 433 amino acid protein that contains one SET domain and one MYND-type zinc finger. Expressed at high levels in liver, heart, kidney, ovary and brain, SMYD2 functions as a lysine methyltransferase that, via methylation of p53, may play a role in repressing p53-mediated transcriptional regulation. The gene encoding MSYD2 maps to human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome. Chromosome 1 houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome. Aberrations in chromosome 1 are found in a variety of cancers, including head and neck cancer, malignant melanoma and multiple myeloma.

CHROMOSOMAL LOCATION

Genetic locus: SMYD2 (human) mapping to 1q32.3; Smyd2 (mouse) mapping to 1 H6.

SOURCE

SMYD2 (F-9) is a mouse monoclonal antibody raised against amino acids 182-433 mapping at the C-terminus of SMYD2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SMYD2 (F-9) is available conjugated to agarose (sc-393827 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-393827 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393827 PE), fluorescein (sc-393827 FITC), Alexa Fluor® 488 (sc-393827 AF488), Alexa Fluor® 546 (sc-393827 AF546), Alexa Fluor® 594 (sc-393827 AF594) or Alexa Fluor® 647 (sc-393827 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393827 AF680) or Alexa Fluor® 790 (sc-393827 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

SMYD2 (F-9) is recommended for detection of SMYD2 of mouse, rat and 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 SMYD2 siRNA (h): sc-76529, SMYD2 siRNA (m): sc-76530, SMYD2 shRNA Plasmid (h): sc-76529-SH, SMYD2 shRNA Plasmid (m): sc-76530-SH, SMYD2 shRNA (h) Lentiviral Particles: sc-76529-V and SMYD2 shRNA (m) Lentiviral Particles: sc-76530-V.

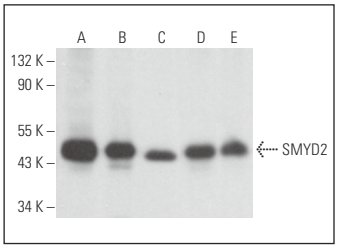
Molecular Weight of SMYD2: 50 kDa.

Positive Controls: ACHN whole cell lysate: sc-364365, Hep G2 cell lysate: sc-2227 or HeLa whole cell lysate: sc-2200.

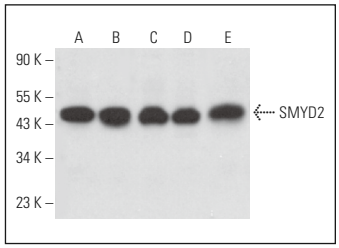
RECOMMENDED SUPPORT REAGENTS

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



SMYD2 (F-9): sc-393827. Western blot analysis of SMYD2 expression in SH-SY5Y (**A**), ACHN (**B**), NIH/3T3 (**C**), Hep G2 (**D**) and HeLa (**E**) whole cell lysates.



SMYD2 (F-9): sc-393827. Western blot analysis of SMYD2 expression in ACHN (**A**), Caki-1 (**B**), c4 (**C**), Neuro-2A (**D**) and C6 (**E**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Khan, M.I.K., et al. 2021. The ribosomal protein eL21 interacts with the protein lysine methyltransferase SMYD2 and regulates its steady state levels. Biochim. Biophys. Acta Mol. Cell Res. 1868: 119079.
2. Yu, Y.Q., et al. 2022. SMYD2 targets RIPK1 and restricts TNF-induced apoptosis and necroptosis to support colon tumor growth. Cell Death Dis. 13: 52.
3. Yu, Y.Q., et al. 2022. SMYD2 inhibition downregulates TMPRSS2 and decreases SARS-CoV-2 infection in human intestinal and airway epithelial cells. Cells 11: 1262.
4. Zhou, Y., et al. 2023. SMYD2 regulates vascular smooth muscle cell phenotypic switching and intimal hyperplasia via interaction with myocardin. Cell. Mol. Life Sci. 80: 264.

STORAGE

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

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.