

SMYD2 (C-20): sc-79084

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.

REFERENCES

1. Brown, M.A., et al. 2006. Identification and characterization of SMYD2: a split SET/MYND domain-containing Histone H3 lysine 36-specific methyltransferase that interacts with the Sin3 histone deacetylase complex. *Mol. Cancer* 5: 26.
2. Huang, J., et al. 2006. Repression of p53 activity by SMYD2-mediated methylation. *Nature* 444: 629-632.
3. Online Mendelian Inheritance in Man, OMIM[™]. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 610663. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

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

SOURCE

SMYD2 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of SMYD2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-79084 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-79084 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

PROTOCOLS

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

APPLICATIONS

SMYD2 (C-20) is recommended for detection of SMYD2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

SMYD2 (C-20) is also recommended for detection of SMYD2 in additional species, including equine, canine, bovine, porcine and avian.

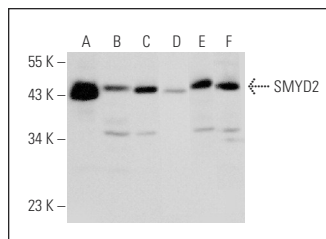
Suitable for use as control antibody for SMYD2 siRNA (h): sc-76529, SMYD2 siRNA (m): sc-76530, SMYD2 shRNA Plasmid (h): sc-76529-SH, SMYD2 shRNA Plasmid (m): sc-76530-SH, SMYD2 shRNA (h) Lentiviral Particles: sc-76529-V and SMYD2 shRNA (m) Lentiviral Particles: sc-76530-V.

SMYD2 (C-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

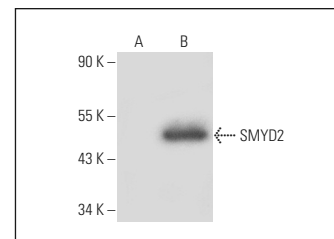
Molecular Weight of SMYD2: 50 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, ACHN whole cell lysate: sc-364365 or SMYD2 (m): 293T Lysate: sc-123669.

DATA



SMYD2 (C-20): sc-79084. Western blot analysis of SMYD2 expression in SH-SY5Y (A), RT-4 (B), HEK293 (C), Neuro-2A (D) and ACHN (E) whole cell lysates and HeLa nuclear extract (F).



SMYD2 (C-20): sc-79084. Western blot analysis of SMYD2 expression in non-transfected: sc-117752 (A) and mouse SMYD2 transfected: sc-123669 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Cho, H.S., et al. 2012. RB1 methylation by SMYD2 enhances cell cycle progression through an increase of RB1 phosphorylation. *Neoplasia* 14: 476-486.

RESEARCH USE

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

MONOS
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Try **SMYD2 (F-9): sc-393827**, our highly recommended monoclonal alternative to SMYD2 (C-20).