

SMYD2 (N-14): sc-79086



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.

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/>
4. Sobral, R.A., et al. 2008. Tumor slices as a model to evaluate doxorubicin *in vitro* treatment and expression of trios of genes PRSS11, MTSS1, CLPTM1 and PRSS11, MTSS1, SMYD2 in canine mammary gland cancer. *Acta Vet. Scand.* 50: 27.

CHROMOSOMAL LOCATION

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

SOURCE

SMYD2 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-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-79086 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-79086 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.

APPLICATIONS

SMYD2 (N-14) 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 (N-14) is also recommended for detection of SMYD2 in additional species, including canine, bovine and porcine.

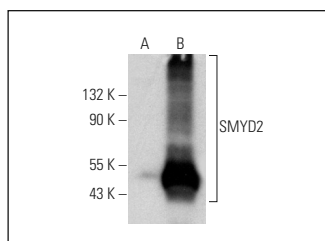
Suitable for use as control antibody for SMYD2 siRNA (h): sc-76529, SMYD2 siRNA (m): sc-76530, SMYD2 shRNA Plasmid (h): sc-76529-SH, SMYD2 shRNA Plasmid (m): sc-76530-SH, SMYD2 shRNA (h) Lentiviral Particles: sc-76529-V and SMYD2 shRNA (m) Lentiviral Particles: sc-76530-V.

SMYD2 (N-14) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of SMYD2: 50 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or SMYD2 (m): 293T Lysate: sc-123669.

DATA



SMYD2 (N-14): sc-79086. Western blot analysis of SMYD2 expression in non-transfected: sc-117752 (A) and mouse SMYD2 transfected: sc-123669 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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

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Try **SMYD2 (F-9): sc-393827**, our highly recommended monoclonal alternative to SMYD2 (N-14).