

SMYD3 (F-19): sc-49519

BACKGROUND

SET and MYND domain-containing 3 (SMYD3), a 428 amino acid protein, is a member of an RNA polymerase complex and plays a role in transcriptional regulation. SMYD3 methylates Lys 4 of histone H3, a specific tag for epigenetic transcriptional activation. The SMYD3 protein contains an N-terminal MYND-type zinc finger domain, followed by a SET domain, which shows methyltransferase activity. The presence of the heat-shock protein HSP 90 α greatly enhances the methyltransferase activity of SMYD3. SMYD3 is expressed in testis and skeletal muscles and is overexpressed in a majority of colorectal carcinomas (CRCs), hepatocellular carcinomas (HCCs) and breast carcinomas (BCs). Inhibition of SMYD3 is a potential chemotherapeutic strategy.

CHROMOSOMAL LOCATION

Genetic locus: SMYD3 (human) mapping to 1q44; Smyd3 (mouse) mapping to 1 H4.

SOURCE

SMYD3 (F-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of SMYD3 of human origin.

PRODUCT

Each vial contains 200 μ g 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-49519 X, 200 μ g/0.1 ml.

Blocking peptide available for competition studies, sc-49519 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

SMYD3 (F-19) is recommended for detection of SMYD3 isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

SMYD3 (F-19) is also recommended for detection of SMYD3 isoforms 1 and 2 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for SMYD3 siRNA (h): sc-61575, SMYD3 siRNA (m): sc-61576, SMYD3 shRNA Plasmid (h): sc-61575-SH, SMYD3 shRNA Plasmid (m): sc-61576-SH, SMYD3 shRNA (h) Lentiviral Particles: sc-61575-V and SMYD3 shRNA (m) Lentiviral Particles: sc-61576-V.

SMYD3 (F-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

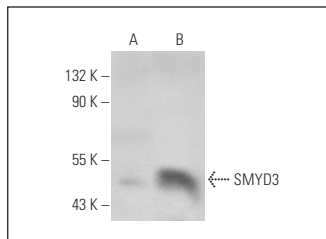
Molecular Weight of SMYD3: 49 kDa.

Positive Controls: SMYD3 (h2): 293T Lysate: sc-173215, HeLa whole cell lysate: sc-2200 or mouse brain extract: sc-2253.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



SMYD3 (F-19): sc-49519. Western blot analysis of SMYD3 expression in non-transfected: sc-117752 (A) and human SMYD3 transfected: sc-173215 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Beghini, A., et al. 2012. Regeneration-associated WNT signaling is activated in long-term reconstituting AC133bright acute myeloid leukemia cells. *Neoplasia* 14: 1236-1248.

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.

MONOS
Satisfaction
Guaranteed

Try **SMYD3 (C-3): sc-398085**, our highly recommended monoclonal alternative to SMYD3 (F-19).