

# SMYD3 (H-180): sc-67210

## 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 $\alpha$  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 (H-180) is a rabbit polyclonal antibody raised against amino acids 249-428 mapping at the C-terminus of SMYD3 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

Store at 4 $^{\circ}$  C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

SMYD3 (H-180) 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  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 (H-180) 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 (H-180) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

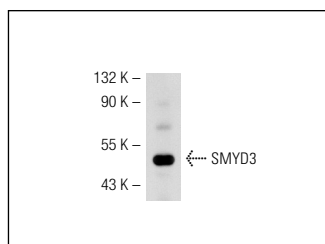
Molecular Weight of SMYD3: 49.1 kDa.

Positive Controls: mouse brain extract: sc-2253 or HeLa whole cell lysate: sc-2200.

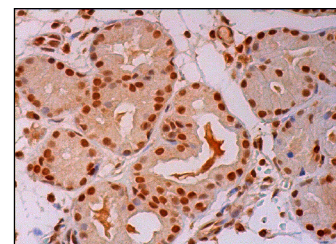
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>TM</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>TM</sup> 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz<sup>TM</sup> Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz<sup>TM</sup>: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



SMYD3 (H-180): sc-67210. Western blot analysis of SMYD3 expression in mouse brain tissue extract.



SMYD3 (H-180): sc-67210. Immunoperoxidase staining of formalin fixed, paraffin-embedded human salivary gland tissue showing nuclear and cytoplasmic staining of glandular cells.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **SMYD3 (C-3): sc-398085**, our highly recommended monoclonal alternative to SMYD3 (H-180).