

# SMYD1 (H-21): sc-134016

## BACKGROUND

SMYD1 (SET and MYND domain-containing protein 1), also known as BOP, ZMYND18 or ZMYND22, is a nuclear and cytoplasmic protein that contains one SET domain and one MYND-type zinc finger. Expressed specifically in cardiac and skeletal muscle, SMYD1 functions as a transcription factor that is essential for cardiac morphogenesis and proper cardiomyocyte differentiation. SMYD1 interacts with the histone deacetylases HDAC1, HDAC2 and HDAC3 and, through this interaction, acts as a histone deacetylase-dependent transcriptional repressor. Defects or deletions in the gene encoding SMYD1 lead to retarded maturation of ventricular cardiomyocytes, further implicating SMYD1 as a crucial component of normal cardiac development.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: Smyd1 (mouse) mapping to 6 C1.

## SOURCE

SMYD1 (H-21) is an affinity purified rabbit polyclonal antibody raised against synthetic SMYD1 peptide of mouse origin.

## PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

## APPLICATIONS

SMYD1 (H-21) is recommended for detection of SMYD1 of mouse, rat and canine 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for SMYD1 siRNA (m): sc-153644, SMYD1 shRNA Plasmid (m): sc-153644-SH and SMYD1 shRNA (m) Lentiviral Particles: sc-153644-V.

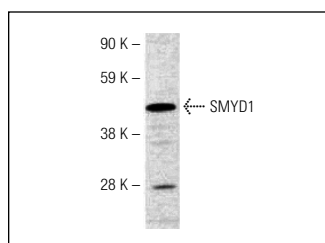
Molecular Weight of SMYD1 isoforms: 57/54/23 kDa.

Postive Controls: NIH/3T3 whole cell lysate: sc-2210.

## 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>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</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).

## DATA



SMYD1 (H-21): sc-134016. Western blot analysis of SMYD1 expression in NIH/3T3 whole cell lysate.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.