

SMYD1 (C-19): sc-79080

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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- Tan, X., et al. 2006. SMYD1, a histone methyltransferase, is required for myofibril organization and muscle contraction in zebrafish embryos. *Proc. Natl. Acad. Sci. USA* 103: 2713-2718.

CHROMOSOMAL LOCATION

Genetic locus: SMYD1 (human) mapping to 2p11.2; Smyd1 (mouse) mapping to 6 C1.

SOURCE

SMYD1 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of SMYD1 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-79080 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-79080 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SMYD1 (C-19) is recommended for detection of SMYD1 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).

SMYD1 (C-19) is also recommended for detection of SMYD1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SMYD1 siRNA (h): sc-76527, SMYD1 siRNA (m): sc-153644, SMYD1 shRNA Plasmid (h): sc-76527-SH, SMYD1 shRNA Plasmid (m): sc-153644-SH, SMYD1 shRNA (h) Lentiviral Particles: sc-76527-V and SMYD1 shRNA (m) Lentiviral Particles: sc-153644-V.

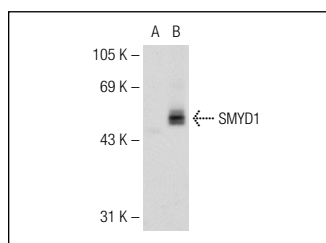
SMYD1 (C-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of human SMYD1: 57 kDa.

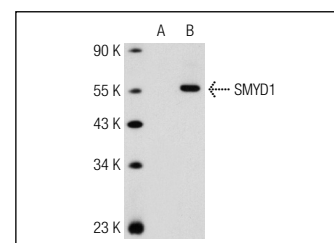
Molecular Weight of mouse SMYD1 isoforms: 56/55/23 kDa.

Positive Controls: SMYD1 (h): 293T Lysate: sc-177956 or NIH/3T3 whole cell lysate: sc-2210.

DATA



SMYD1 (C-19): sc-79080. Western blot analysis of SMYD1 expression in non-transfected: sc-117752 (A) and human SMYD1 transfected: sc-177956 (B) 293T whole cell lysates.



SMYD1 (C-19): sc-79080. Western blot analysis of SMYD1 expression in non-transfected: sc-117752 (A) and human SMYD1 transfected: sc-177957 (B) 293T whole cell lysates.

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.



Try **SMYD1 (D-1): sc-514805** or **SMYD1 (A-12): sc-514804**, our highly recommended monoclonal alternatives to SMYD1 (C-19).