SANTA CRUZ BIOTECHNOLOGY, INC.

SUV39H2 (Z-23): sc-130886

BACKGROUND

Distinct modifications of histone tails, such as acetylation, phosphorylation and methylation, regulate nuclear processes by organizing chromatin into higher order structures. Higher order chromatin influences chromosome function and epigenetic gene regulation. SUV39H2 (suppressor of variegation 3-9 homolog 2), also known as KMT1B or Histone H3-K9 methyltransferase 2, is a 410 amino acid protein that localizes to the centromere and contains one SET domain, one pre-SET domain, one post-SET domain and one chromo domain. Expressed at high levels in adult testis, SUV39H2 functions as a histone methyltransferase that trimethylates the Lys-9 residue of Histone H3, thereby playing an essential role in establishing constitutive heterochromatin at pericentric and telomere regions. SUV39H2 conveys its enzymatic activity via its multiple catalytic domains, which are necessary for both stable binding of SUV39H2 to chromatin and for SUV39H2 methyltransferase activity. Multiple isoforms of SUV39H2 exist due to alternative splicing events.

REFERENCES

1. O'Carroll, D., et al. 2000. Isolation and characterization of SUV39H2, a second Histone H3 methyltransferase gene that displays testis-specific expression. Mol. Cell. Biol. 20: 9423-9433.
2. Rea, S., et al. 2000. Regulation of chromatin structure by site-specific Histone H3 methyltransferases. Nature 406: 593-599.

CHROMOSOMAL LOCATION

Genetic locus: SUV39H2 (human) mapping to 10p13.

SOURCE

SUV39H2 (Z-23) is a purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of SUV39H2 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

SUV39H2 (Z-23) is recommended for detection of SUV39H2 of 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), 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).

Suitable for use as control antibody for SUV39H2 siRNA (h): sc-106822, SUV39H2 shRNA Plasmid (h): sc-106822-SH and SUV39H2 shRNA (h) Lentiviral Particles: sc-106822-V.

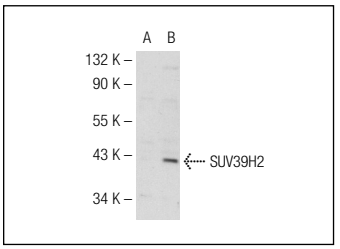
Molecular Weight of SUV39H2: 53 kDa.

Positive Controls: SUV39H2 (h): 293T Lysate: sc-175630 or HL-60 whole cell lysate: sc-2209.

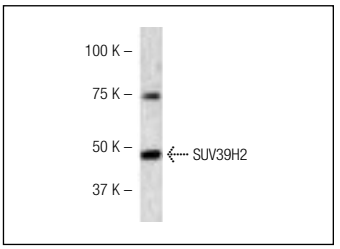
RECOMMENDED SECONDARY REAGENTS

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™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 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™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

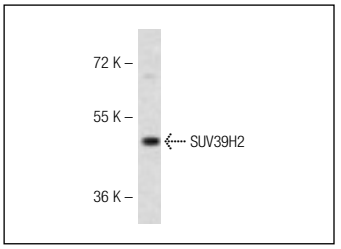
DATA



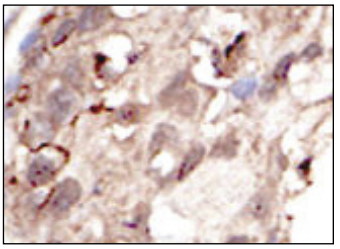
SUV39H2 (Z-23): sc-130886. Western blot analysis of SUV39H2 expression in non-transfected: sc-117752 (**A**) and human SUV39H2 transfected: sc-175630 (**B**) 293T whole cell lysates.



SUV39H2 (Z-23): sc-130886. Western blot analysis of SUV39H2 expression in 293 whole cell lysate.



SUV39H2 (Z-23): sc-130886. Western blot analysis of SUV39H2 expression in HL-60 whole cell lysate.



SUV39H2 (Z-23): sc-130886. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Soria, C., et al. 2010. Heterochromatin silencing of p53 target genes by a small viral protein. Nature 466: 1076-1081.

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.