SANTA CRUZ BIOTECHNOLOGY, INC.

EHMT1 (V-19): sc-68166

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

EHMT1 (also known as euchromatic histone-lysine N-methyltransferase 1) is a widely expressed histone methyltransferase. EHMT1 belongs to the histone-lysine methyltransferase family and contains eight ANK repeats, one pre-SET domain and one SET domain. It acts to methylate Lys 9 of Histone H3, which represents a specific tag for epigenetic transcriptional repression by recruiting HP1 proteins to methylated histones. During G_0 phase, EHMT1 is found as part of the E2F6.com-1 complex and probably contributes to silencing of Myc- and E2F-responsive genes, suggesting a role in G_0/G_1 transition in the cell cycle. EHMT1 defects are the cause of chromosome 9q subtelomeric deletion syndrome. Common indicators of this syndrome are severe mental retardation, hypotonia, brachy(micro)cephaly, epileptic seizures, synophrys, prognathism, macroglossia and conotruncal heart defects.

REFERENCES

1. Ogawa, H., et al. 2002. A complex with chromatin modifiers that occupies E2F- and Myc-responsive genes in G_0 cells. Science 296: 1132-1136.
2. Kleefstra, T., et al. 2005. Disruption of the gene euchromatin histone methyl transferase 1 (Eu-HMTase1) is associated with the 9q34 subtelomeric deletion syndrome. J. Med. Genet. 42: 299-306.
3. Ueda, J., et al. 2006. Zinc finger protein Wiz links G9a/GLP histone methyltransferases to the co-repressor molecule CtBP. J. Biol. Chem. 281: 20120-20128.
4. Cebrian, A., et al. 2006. Genetic variants in epigenetic genes and breast cancer risk. Carcinogenesis 27: 1661-1669.
5. Kleefstra, T., et al. 2006. Loss-of-function mutations in euchromatin histone methyl transferase 1 (EHMT1) cause the 9q34 subtelomeric deletion syndrome. Am. J. Hum. Genet. 79: 370-377.
6. McGraw, S., et al. 2007. Temporal expression of factors involved in chromatin remodeling and in gene regulation during early bovine *in vitro* embryo development. Reproduction 133: 597-608.
7. Stewart, D.R. and Kleefstra, T. 2007. The chromosome 9q subtelomere deletion syndrome. Am. J. Med. Genet. C Semin. Med. Genet. 145: 383-392.

CHROMOSOMAL LOCATION

Genetic locus: EHMT1 (human) mapping to 9q34.3; Ehmt1 (mouse) mapping to 2 A3.

SOURCE

EHMT1 (V-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of EHMT1 of human origin.

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.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-68166 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

EHMT1 (V-19) is recommended for detection of EHMT1 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).

Suitable for use as control antibody for EHMT1 siRNA (h): sc-62261, EHMT1 siRNA (m): sc-62262, EHMT1 shRNA Plasmid (h): sc-62261-SH, EHMT1 shRNA Plasmid (m): sc-62262-SH, EHMT1 shRNA (h) Lentiviral Particles: sc-62261-V and EHMT1 shRNA (m) Lentiviral Particles: sc-62262-V.

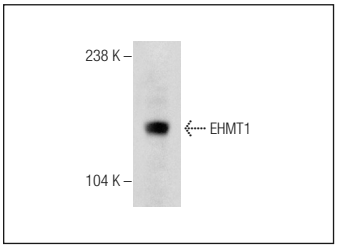
Molecular Weight of EHMT1: 138 kDa.

Positive Controls: MES-SA/Dx5 cell lysate: sc-2284.

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



EHMT1 (V-19): sc-68166. Western blot analysis of EHMT1 expression in MES-SA/Dx5 whole cell lysate.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.