

EHMT1 (T-22): sc-130747

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 G₀ 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 G₀/G₁ 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

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- 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.
- Cebrian, A., et al. 2006. Genetic variants in epigenetic genes and breast cancer risk. *Carcinogenesis* 27: 1661-1669.
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- Stewart, D.R. and Kleefstra, T. 2007. The chromosome 9q subtelomere deletion syndrome. *Am. J. Med. Genet. C Semin. Med. Genet.* 145: 383-392.
- Matsuoka, S., et al. 2007. ATM and ATR substrate analysis reveals extensive protein networks responsive to DNA damage. *Science* 316: 1160-1166.

CHROMOSOMAL LOCATION

Genetic locus: EHMT1 (human) mapping to 9q34.3.

SOURCE

EHMT1 (T-22) is a purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of EHMT1 of human origin.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

EHMT1 (T-22) is recommended for detection of EHMT1 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)] 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 shRNA Plasmid (h): sc-62261-SH and EHMT1 shRNA (h) Lentiviral Particles: sc-62261-V.

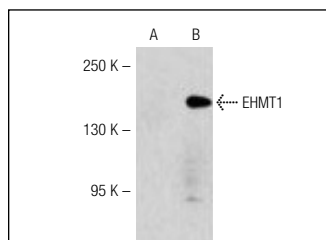
Molecular Weight of EHMT1: 138 kDa.

Positive Controls: Human EHMT1 transfected 293 whole cell lysate or HeLa whole cell lysate: sc-2200.

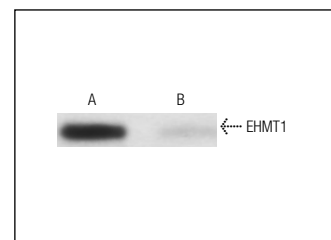
RECOMMENDED SECONDARY REAGENTS

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™ 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).

DATA



EHMT1 (T-22): sc-130747. Western blot analysis of EHMT1 expression in non-transfected (A) and human EHMT1 transfected (B) 293 whole cell lysates.



EHMT1 (T-22): sc-130747. Western blot analysis of EHMT1 expression in non-transfected control (A) and EHMT1 siRNA transfected (B) HeLa cell lysates. Kindly provided by The Dr. Michael Rosenfeld Laboratory, University of California San Diego.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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