

H3-K9-HMTase (K-19): sc-54457

BACKGROUND

H3-K9-HMTase (histone-lysine N-methyltransferase SETDB2) is a 719 amino acid protein encoded by the human gene SETDB2. H3-K9-HMTase, which belongs to the histone-lysine methyltransferase family, contains one MBD (methyl-CpG-binding) domain, one pre-SET domain and one SET domain. H3-K9-HMTase is believed to be a probable histone methyltransferase with catalytic activity. Epigenetic gene silencing in eukaryotes is regulated in part by lysine methylation of the core histone proteins. While histone lysine methylation is known to control gene expression through the recruitment of modification-specific effector proteins, it remains unknown whether non-histone chromatin proteins are targets for similar modification-recognition systems. Located in the nucleus, H3-K9-HMTase is ubiquitously expressed with highest expression found in heart, testis and ovary.

REFERENCES

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3. Tachibana, M., et al. 2005. Histone methyltransferases G₉ α and GLP form heteromeric complexes and are both crucial for methylation of euchromatin at H3-K9. *Genes Dev.* 19: 815-826.
4. Nishijima, H., et al. 2006. Nuclear RanGAP is required for the heterochromatin assembly and is reciprocally regulated by histone H3 and Ctr4 histone methyltransferase in *Schizosaccharomyces pombe*. *Mol. Biol. Cell* 17: 2524-2536.
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CHROMOSOMAL LOCATION

Genetic locus: SETDB2 (human) mapping to 13q14.2.

SOURCE

H3-K9-HMTase (K-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of H3-K9-HMTase 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.

PRODUCT

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

Blocking peptide available for competition studies, sc-54457 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

H3-K9-HMTase (K-19) is recommended for detection of H3-K9-HMTase of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

H3-K9-HMTase (K-19) is also recommended for detection of H3-K9-HMTase in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for H3-K9-HMTase siRNA (h): sc-62429, H3-K9-HMTase shRNA Plasmid (h): sc-62429-SH and H3-K9-HMTase shRNA (h) Lentiviral Particles: sc-62429-V.

Molecular Weight of H3-K9-HMTase: 82 kDa.

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) 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.

RESEARCH USE

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

PROTOCOLS

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