

# SUV420H1 (Q-23): sc-134048

## BACKGROUND

SUV420H1 (suppressor of variegation 4-20 homolog 1), also known as CGI85 or KMT5B, is an 885 amino acid protein that is associated with pericentric heterochromatin in the nucleus. One of several members of the histone-lysine methyltransferase family, SUV420H1 functions as a histone methyltransferase that trimethylates the Lys 20 residue of Histone H4, thereby tagging H4 for transcriptional repression. Characteristic of most histone methyltransferases, SUV420H1 contains one SET domain through which it confers its enzymatic activity. The co-localization of SUV420H1 with pericentric heterochromatin allows the methyltransferase to play a key role in the establishment of constitutive heterochromatin, further implicating SUV420H1 as a regulator of transcriptional events. Expression of SUV420H1 is strongly downregulated in breast cancer cells, suggesting a role for SUV420H1 in tumor suppression. Three isoforms of SUV420H1 are expressed due to alternative splicing events.

## REFERENCES

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- Tryndyak, V.P., Kovalchuk, O. and Pogribny, I.P. 2006. Loss of DNA methylation and Histone H4 Lysine 20 trimethylation in human breast cancer cells is associated with aberrant expression of DNA methyltransferase 1, SUV420H2 histone methyltransferase and methyl-binding proteins. *Cancer Biol. Ther.* 5: 65-70.
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- Szafrański, K., Schindler, S., Taudien, S., Hiller, M., Huse, K., Jahn, N., Schreiber, S., Backofen, R. and Platzer, M. 2007. Violating the splicing rules: TG dinucleotides function as alternative 3' splice sites in U2-dependent introns. *Genome Biol.* 8: R154-R154.

## CHROMOSOMAL LOCATION

Genetic locus: SUV420H1 (human) mapping to 11q13.2.

## SOURCE

SUV420H1 (Q-23) is an affinity purified rabbit polyclonal antibody raised against synthetic SUV420H1 peptide of human origin.

## PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

## APPLICATIONS

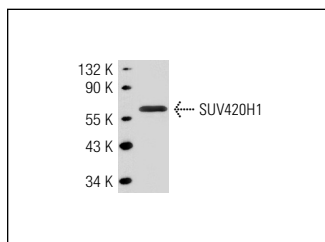
SUV420H1 (Q-23) is recommended for detection of SUV420H1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), 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 SUV420H1 siRNA (h): sc-96776, SUV420H1 shRNA Plasmid (h): sc-96776-SH and SUV420H1 shRNA (h) Lentiviral Particles: sc-96776-V.

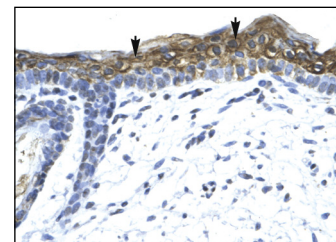
Molecular Weight of SUV420H1 isoforms: 99/45/32 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or MCF7 whole cell lysate: sc-2206.

## DATA



SUV420H1 (Q-23): sc-134048. Western blot analysis of SUV420H1 expression in MCF7 nuclear extract.



SUV420H1 (Q-23): sc-134048. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human skin tissue showing nuclear localization.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.