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Produktinformation

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- Diagnostik & molekulare Diagnostik
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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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SANTA CRUZ BIOTECHNOLOGY, INC.

Dnmt3a (h): 293T Lysate: sc-115950

BACKGROUND

Methylation at the 5'-position of cytosine is the only known naturally occurring covalent modification of the mammalian genome. DNA methylation requires the enzymatic activity of DNA 5-cytosine methyltransferase (Dnmt) proteins, which catalyze the transfer of a methyl group from S-adenosyl methionine to the 5'-position of cytosines residing in the dinucleotide CpG motif, and this methylation results in transcriptional repression of the target gene. The Dnmt enzymes are encoded by independent genes. Dnmt1 is the most abundant, and it preferentially methylates hemimethylated DNA and coordinates gene expression during development. Additional mammalian Dnmt proteins include Dnmt2 and Dnmt3. Dnmt2 lacks the large N-terminal regulator domain of Dnmt1, is expressed at substantially lower levels in adult tissues, and is likely involved in methylating newly integrated retroviral DNA. Dnmt3a and Dnmt3b are encoded by two distinct genes, but both are abundantly expressed in embryonic stem cells, where they also methylate CpG motifs on DNA.

REFERENCES

1. Yoder, J.A., et al. 1997. DNA (cytosine-5)-methyltransferases in mouse cells and tissues. Studies with a mechanism-based probe. J. Mol. Biol. 270: 385-395.
2. Okano, M., et al. 1998. Dnmt2 is not required for *de novo* and maintenance methylation of viral DNA in embryonic stem cells. Nucleic Acids Res. 26: 2536-2540.
3. Hsieh, C.L. 1999. *In vivo* activity of murine *de novo* methyltransferases, Dnmt3a and Dnmt3b. Mol. Cell. Biol. 19: 8211-8218.
4. Cardoso, M.C., et al. 1999. DNA methyltransferase is actively retained in the cytoplasm during early development. J. Cell Biol. 147: 25-32.
5. Walsh, C.P., et al. 1999. Cytosine methylation and mammalian development. Genes Dev. 13: 26-34.
6. Bigey, P., et al. 2000. Transcriptional regulation of the human DNA methyltransferase (Dnmt1) gene. Gene 242: 407-418.

CHROMOSOMAL LOCATION

Genetic locus: DNMT3A (human) mapping to 2p23.3.

PRODUCT

Dnmt3a (h): 293T Lysate represents a lysate of human Dnmt3a transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

Dnmt3a (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Dnmt3a antibodies. Recommended use: 10-20 µl per lane.

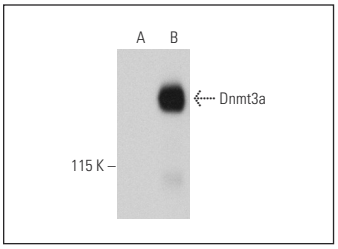
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Dnmt3a (64B1446): sc-52921 is recommended as a positive control antibody for Western Blot analysis of enhanced human Dnmt3a expression in Dnmt3a transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

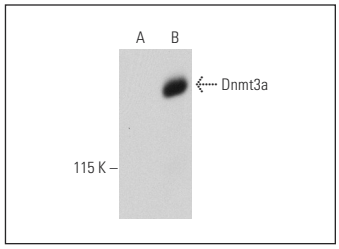
STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

DATA



Dnmt3a (64B1446): sc-52921. Western blot analysis of Dnmt3a expression in non-transfected: sc-117752 (**A**) and human Dnmt3a transfected: sc-115950 (**B**) 293T whole cell lysates.



Dnmt3a (64B814): sc-56656. Western blot analysis of Dnmt3a expression in non-transfected: sc-117752 (**A**) and human Dnmt3a transfected: sc-115950 (**B**) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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