SANTA CRUZ BIOTECHNOLOGY, INC.

Dnmt3L (h): 293 Lysate: sc-173143

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, thereby repressing expression of the target gene. Dnmt3L (DNA (cytosine-5)-methyltransferase 3-like) is a 387 amino acid protein that contains one ADD-type zinc finger and is a member of the Dnmt family. Localized to the nucleus and expressed at lows levels in thymus, testis and ovary, Dnmt3L does not exhibit DNA methyltransferase activity, but is able to stimulate *de novo* methylation by Dnmt3 and is thought to play a key role in the establishment of genomic imprints. Additionally, Dnmt3L interacts with histone deacetylase 1 (HDAC1) and, through this interaction, mediates transcriptional repression. Multiple isoforms of Dnmt3L exist due to alternative splicing events.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: DNMT3L (human) mapping to 21q22.3.

PRODUCT

Dnmt3L (h): 293 Lysate represents a lysate of human Dnmt3L transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

Dnmt3L (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive Dnmt3L antibodies. Recommended use: 10-20 µl per lane.

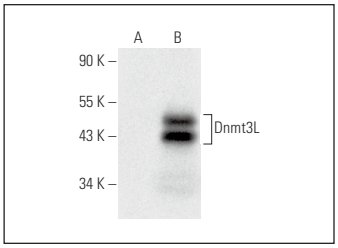
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

Dnmt3L (A-4): sc-393603 is recommended as a positive control antibody for Western Blot analysis of enhanced human Dnmt3L expression in Dnmt3L transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



Dnmt3L (A-4): sc-393603. Western blot analysis of Dnmt3L expression in non-transfected: sc-110760 (**A**) and human Dnmt3L transfected: sc-173143 (**B**) 293 whole cell lysates.

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.

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.