SANTA CRUZ BIOTECHNOLOGY, INC.

MBD3L2 (P-14): sc-240663



The Power to Question

BACKGROUND

Methylation of DNA contributes to the regulation of gene transcription in both mammalian and invertebrate systems. DNA methylation requires the enzymatic activity of DNA methyltransferase and predominates on cytosine residues that are present in dinucleotide motifs consisting of a 5' cytosine followed by guanosine (CpG), which results in transcriptional repression of the methylated gene. Several proteins have been identified that associate with the methyl-CpG sites, and they include methyl-CpG binding protein-1 (MBD1), MBD2, MBD3, MBD4 and MeCP2. Consisting of 208 amino acids each, MBD3L2 (MBD3-like 2), MBD3L3, MBD3L4 and MBD3L5 are members of the MBD3L family. All four proteins are encoded by strongly repeated regions of the 19p13 chromosome.

REFERENCES

- Nakao, M., Matsui, S., Yamamoto, S., Okumura, K., Shirakawa, M. and Fujita, N. 2001. Regulation of transcription and chromatin by methyl-CpG binding protein MBD1. Brain Dev. 23: S174-S176.
- Ballestar, E. and Wolffe, A.P. 2001. Methyl-CpG-binding proteins. Targeting specific gene repression. Eur. J. Biochem. 268: 1-6.
- Jiang, C.L., Jin, S.G., Lee, D.H., Lan, Z.J., Xu, X., O'Connor, T.R., Szabó, P.E., Mann, J.R., Cooney, A.J. and Pfeifer, G.P. 2002. MBD3L1 and MBD3L2, two new proteins homologous to the methyl-CpG-binding proteins MBD2 and MBD3: characterization of MBD3L1 as a testis-specific transcriptional repressor. Genomics 80: 621-629.
- 4. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 607964. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Goshima, N., Kawamura, Y., Fukumoto, A., Miura, A., Honma, R., Satoh, R., Wakamatsu, A., Yamamoto, J., Kimura, K., Nishikawa, T., Andoh, T., lida, Y., Ishikawa, K., Ito, E., Kagawa, N., Kaminaga, C., Kanehori, K., Kawakami, B., Kenmochi, K., et al. 2008. Human protein factory for converting the transcriptome into an *in vitro*-expressed proteome, Nat. Methods 5: 1011-1017.
- Defossez, P.A. and Stancheva, I. 2011. Biological functions of methyl-CpGbinding proteins. Prog. Mol. Biol. Transl. Sci. 101: 377-398.

CHROMOSOMAL LOCATION

Genetic locus: Mbd3l2 (mouse) mapping to 9 A2.

SOURCE

MBD3L2 (P-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MBD3L2 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-240663 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MBD3L2 (P-14) is recommended for detection of MBD3L2 of mouse 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).

Suitable for use as control antibody for MBD3L2 siRNA (m): sc-149304, MBD3L2 shRNA Plasmid (m): sc-149304-SH and MBD3L2 shRNA (m) Lentiviral Particles: sc-149304-V.

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) Immunofluo-rescence: 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.

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 or our catalog for detailed protocols and support products.