SANTA CRUZ BIOTECHNOLOGY, INC.

Dmap1 (K-18): sc-47582

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Methylation of DNA contributes to the regulation of gene transcription in eukaryotic systems. DNA methylation is predominantly found on cytosine residues that are present in dinucleotide motifs consisting of a 5' cytosine followed by a guanosine (CpG), and it requires the enzymatic activity of DNA methyltransferases (DNMTs), which results in transcriptional repression of the methylated gene. DNA methyltransferase 1-associating protein (Dmap1) binds to methyl-CpG rich domains and mediate the transcriptional inhibition associated with DNA methylation. Dmap1 interacts with Daxx to enhanced Daxx-mediated repression of glucocorticoid receptor transcriptional activity. Daxx also protects Dmap1 from protein degradation *in vivo*.

REFERENCES

1. Boyes, J. and Bird, A. 1991. DNA methylation inhibits transcription indirectly via a methyl-CpG binding protein. Cell 64: 1123-1134.
2. Nan, X., Ng, H.H., Johnson, C.A., Laherty, C.D., Turner, B.M., Eisenman, R.N. and Bird, A. 1998. Transcriptional repression by the methyl-CpG-binding protein MeCP2 involves a histone deacetylase complex. Nature 393: 386-389.
3. Muromoto, R., Sugiyama, K., Takachi, A., Imoto, S., Sato, N., Yamamoto, T., Oritani, K., Shimoda, K. and Matsuda, T. 2004. Physical and functional interactions between Daxx and DNA methyltransferase 1-associated protein, DMAP1. J. Immunol.172: 2985-2993.
4. Delgermaa, L., Hayashi, N., Dorjsuren, D., Nomura, T., Thuy, le T.T. and Murakami, S. 2004. Subcellular localization of RPB5-mediating protein and its putative functional partner. Mol. Cell. Biol. 24: 8556-8566.
5. Muromoto, R., Sugiyama, K., Yamamoto, T., Oritani, K., Shimoda, K. and Matsuda, T. 2004. Physical and functional interactions between Daxx and TSG101. Biochem. Biophys. Res. Commun. 316: 827-833.
6. Xin, H., Yoon, H.G., Singh, P.B., Wong, J. and Qin, J. 2004. Components of a pathway maintaining histone modification and heterochromatin protein 1 binding at the pericentric heterochromatin in Mammalian cells. J. Biol. Chem. 279: 9539-9546.
7. Liu, Z. and Fisher, RA. 2004. RGS6 interacts with Dmap1 and DNMT1 and inhibits Dmap1 transcriptional repressor activity. J. Biol. Chem. 279: 14120-14128.

CHROMOSOMAL LOCATION

Genetic locus: DMAP1 (human) mapping to 1p34.1; Dmap1 (mouse) mapping to 4 D2.1.

SOURCE

Dmap1 (K-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Dmap1 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 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-47582 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-47582 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Dmap1 (K-18) is recommended for detection of Dmap1 of mouse, rat and 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).

Dmap1 (K-18) is also recommended for detection of Dmap1 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for Dmap1 siRNA (h): sc-60543, Dmap1 siRNA (m): sc-60544, Dmap1 shRNA Plasmid (h): sc-60543-SH, Dmap1 shRNA Plasmid (m): sc-60544-SH, Dmap1 shRNA (h) Lentiviral Particles: sc-60543-V and Dmap1 shRNA (m) Lentiviral Particles: sc-60544-V.

Dmap1 (K-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Dmap1: 53 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, BJAB nuclear extract: sc-2145 or NIH/3T3 nuclear extract: sc-2138.

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.