SANTA CRUZ BIOTECHNOLOGY, INC.

Dmap1 (N-18): sc-47583

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., et al. 1998. Transcriptional repression by the methyl-CpG-binding protein MeCP2 involves a histone deacetylase complex. Nature 393: 386-389.
3. Muromoto, R., et al. 2004. Physical and functional interactions between Daxx and DNA methyltransferase 1-associated protein, Dmap1. J. Immunol. 172: 2985-2993.
4. Delgermaa, L., et al. 2004. Subcellular localization of RPB5-mediating protein and its putative functional partner. Mol. Cell. Biol. 24: 8556-8566.
5. Muromoto, R., et al. 2004. Physical and functional interactions between Daxx and tsg 101. Biochem. Biophys. Res. Commun. 316: 827-833.
6. Xin, H., et al. 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.

CHROMOSOMAL LOCATION

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

SOURCE

Dmap1 (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Dmap1 of human origin.

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-47583 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-47583 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Dmap1 (N-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), 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

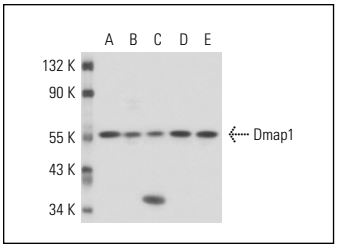
Suitable for use as control antibody for Dmap1 siRNA (h): sc-60543, Dmap1 siRNA (m): sc-60544, Dmap1 shRNA Plasmid (h): sc-60543-SH, Dmap1 shRNA Plasmid (m): sc-60544-SH, Dmap1 shRNA (h) Lentiviral Particles: sc-60543-V and Dmap1 shRNA (m) Lentiviral Particles: sc-60544-V.

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

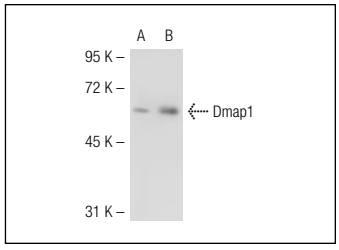
Molecular Weight of Dmap1: 53 kDa.

Positive Controls: BJAB nuclear extract: sc-2145, NIH/3T3 nuclear extract: sc-2138 or Dmap1 (m): 293T Lysate: sc-125251.

DATA



Dmap1 (N-18): sc-47583. Western blot analysis of Dmap1 expression in BJAB (**A**), NIH/3T3 (**B**), SW480 (**C**), IMR-32 (**D**) and Ramos (**E**) nuclear extracts.



Dmap1 (N-18): sc-47583. Western blot analysis of Dmap1 expression in non-transfected: sc-117752 (**A**) and mouse Dmap1 transfected: sc-125251 (**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 or our catalog for detailed protocols and support products.