SANTA CRUZ BIOTECHNOLOGY, INC.

RbAp46 (N-19): sc-8272

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

In the intact cell, DNA is closely associated with histones and other nuclear proteins to form chromatin. The remodeling of chromatin is believed to be a critical component of transcriptional regulation, and a major source of this remodeling is brought about by the acetylation of nucleosomal histones. Acetylation of lysine residues in the amino-terminal tail domain of histone results in an allosteric change in the nucleosomal conformation, and an increased accessibility of DNA to transcription factors. Conversely, the deacetylation of histones is associated with transcriptional silencing. Several mammalian proteins have been identified as nuclear histone acetylases, including GCN5, PCAF (for p300/CBP-associated factor), p300/CBP, and the TFIID subunit TAF II p250. Mammalian HDAC1 (also designated HD1), HDAC2 (also designated RPD3) and HDAC3, all of which are related to the yeast transcriptional regulator Rpd3p, have been identified as histone deacetylases. The retinoblastoma binding proteins RbAp46 and RbAp48 have been identified as histone binding proteins, and they are components of the histone deacetylase complex.

CHROMOSOMAL LOCATION

Genetic locus: RBBP7 (human) mapping to Xp22.2; Rbbp7 (mouse) mapping to X F4.

SOURCE

RbAp46 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of RbAp46 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-8272 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RbAp46 (N-19) is recommended for detection of RbAp46 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

RbAp46 (N-19) is also recommended for detection of RbAp46 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for RbAp46 siRNA (h): sc-37960, RbAp46 siRNA (m): sc-37961, RbAp46 shRNA Plasmid (h): sc-37960-SH, RbAp46 shRNA Plasmid (m): sc-37961-SH, RbAp46 shRNA (h) Lentiviral Particles: sc-37960-V and RbAp46 shRNA (m) Lentiviral Particles: sc-37961-V.

Molecular Weight of RbAp46: 46 kDa.

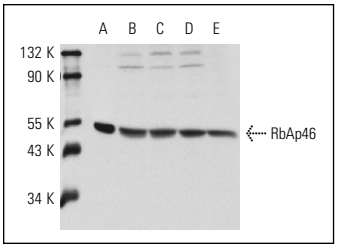
STORAGE

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

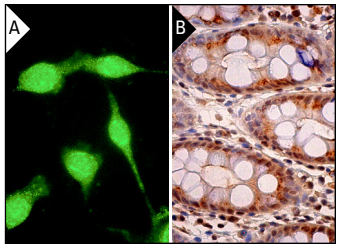
RESEARCH USE

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

DATA



RbAp46 (N-19): sc-8272. Western blot analysis of RbAp46 expression in HeLa (**A**), HL-60 (**B**), K-562 (**C**), A-431 (**D**) and NIH/3T3 (**E**) nuclear extracts.



RbAp46 (N-19): sc-8272. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing nuclear and cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Nicolas, E., et al. 2001. The histone deacetylase HDAC3 targets RbAp48 to the retinoblastoma protein. Nucleic Acids Res. 29: 3131-3136.
2. Hong, W., et al. 2005. FOG-1 recruits the NuRD repressor complex to mediate transcriptional repression by GATA-1. EMBO J. 24: 2367-2378.
3. Venkataraman, K., et al. 2005. Analysis of a noncanonical poly(A) site reveals a tripartite mechanism for vertebrate poly(A) site recognition. Genes Dev. 19: 1315-1327.
4. Isaac, C.E., et al. 2006. The retinoblastoma protein regulates pericentric heterochromatin. Mol. Cell. Biol. 26: 3659-3671.
5. Liang, J., et al. 2008. Nanog and Oct-4 associate with unique transcriptional repression complexes in embryonic stem cells. Nat. Cell Biol. 10: 731-739.
6. Creekmore, A.L., et al. 2008. The role of retinoblastoma-associated proteins 46 and 48 in estrogen receptor alpha mediated gene expression. Mol. Cell. Endocrinol. 291: 79-86.
7. Cui, S., et al. 2011. Nuclear receptors TR2 and TR4 recruit multiple epigenetic transcriptional corepressors that associate specifically with the embryonic β-type globin promoters in differentiated adult erythroid cells. Mol. Cell. Biol. 31: 3298-3311.
8. Gunther, K., et al. 2013. Differential roles for MBD2 and MBD3 at methylated CpG islands, active promoters and binding to exon sequences. Nucleic Acids Res. 41: 3010-3021.