SANTA CRUZ BIOTECHNOLOGY, INC.

RbAp48 (K-15): sc-12434

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 deacety-deacetylase complex.

CHROMOSOMAL LOCATION

Genetic locus: RBBP4 (human) mapping to 1p35.1, RBBP7 (human) mapping to Xp22.2; Rbbp4 (mouse) mapping to 4 D2.2, Rbbp7 (mouse) mapping to X F4.

SOURCE

RbAp48 (K-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of RbAp48 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.

Blocking peptide available for competition studies, sc-12434 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.

RESEARCH USE

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

APPLICATIONS

RbAp48 (K-15) is recommended for detection of RbAp48 and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

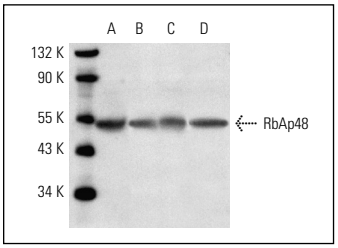
RbAp48 (K-15) is also recommended for detection of RbAp48 and RbAp46 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of RbAp48: 48 kDa.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



RbAp48 (K-15): sc-12434. Western blot analysis of RbAp48 expression in Y79 (**A**), HeLa (**B**) and K-562 (**C**) nuclear extracts and Y79 (**D**) whole cell lysate.

SELECT PRODUCT CITATIONS

1. Zhang, Y., et al. 2002. Silencing of transcription of the human luteinizing hormone receptor gene by histone deacetylase-mSin3A complex. J. Biol. Chem. 277: 33431-33438.
2. Petrak, J., et al. 2007. Proteomic analysis of erythroid differentiation induced by hexamethylene bisacetamide in murine erythroleukemia cells. Exp. Hematol. 35: 193-202.
3. 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.
4. Tyson-Capper, A.J., et al. 2009. Interplay between polypyrimidine tract binding protein-associated splicing factor and human myometrial progesterone receptors. J. Mol. Endocrinol. 43: 29-41.
5. Ren, G., et al. 2012. Polycomb protein EZH2 regulates tumor invasion via the transcriptional repression of the metastasis suppressor RKIP in breast and prostate cancer. Cancer Res. 72: 3091-3104.