SANTA CRUZ BIOTECHNOLOGY, INC.

RbAp46/p48 (G-8): sc-373873

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 accessiblity 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: 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

RbAp46/p48 (G-8) is a mouse monoclonal antibody raised against amino acids 126-425 mapping at the C-terminus of RbAp48 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RbAp46/p48 (G-8) is available conjugated to agarose (sc-373873 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373873 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373873 PE), fluorescein (sc-373873 FITC), Alexa Fluor® 488 (sc-373873 AF488), Alexa Fluor® 546 (sc-373873 AF546), Alexa Fluor® 594 (sc-373873 AF594) or Alexa Fluor® 647 (sc-373873 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-373873 AF680) or Alexa Fluor® 790 (sc-373873 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

RbAp46/p48 (G-8) is recommended for detection of RbAp46 and RbAp48 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

RbAp46/p48 (G-8) is also recommended for detection of RbAp46 and RbAp48 in additional species, including canine, bovine and porcine.

Molecular Weight (predicted) of RbAp46/p48 isoforms: 46/48/46/44 kDa.

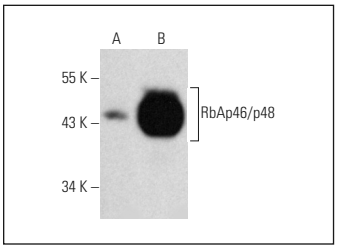
Molecular Weight (observed) of RbAp46/p48: 42 kDa.

Positive Controls: HeLa nuclear extract: sc-2120 or HL-60 whole cell lysate: sc-2209.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



RbAp46/p48 (G-8): sc-373873. Western blot analysis of RbAp46/p48 expression in HeLa nuclear extract (**A**) and HL-60 whole cell lysate (**B**).

SELECT PRODUCT CITATIONS

1. Xuan, C., et al. 2013. RBB, a novel transcription repressor, represses the transcription of HDM2 oncogene. Oncogene 32: 3711-3721.
2. Li, W., et al. 2017. The FOXN3-NEAT1-SIN3A repressor complex promotes progression of hormonally responsive breast cancer. J. Clin. Invest. 127: 3421-3440.
3. Biswas, S., et al. 2018. Differentially expressed host long intergenic non-coding RNA and mRNA in HIV-1 and HIV-2 infection. Sci. Rep. 8: 2546.
4. Ting, X., et al. 2019. USP11 acts as a histone deubiquitinase functioning in chromatin reorganization during DNA repair. Nucleic Acids Res. 47: 9721-9740.
5. Liu, N., et al. 2020. The cross-talk between methylation and phosphorylation in lymphoid-specific helicase drives cancer stem-like properties. Signal Transduct. Target. Ther. 5: 197.

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.