SANTA CRUZ BIOTECHNOLOGY, INC.

Brm (H-56): sc-28710

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Brahma protein (Brm) is an ATPase subunit of the *Drosophila melanogaster* Brm complex, which is highly related to the mammalian SWI/SNF chromatin-remodeling complex. Brm is a transcriptional activator of Hox genes and associates with nearly all transcriptionally active chromatin in a pattern that is non-overlapping with that of Polycomb, a repressor of Hox gene transcription. The Brm complex is an essential coactivator for the trithorax group protein Zeste, a DNA-binding activator of homeotic genes. Reduction of Brm function dramatically reduces the association of RNA polymerase II with *Drosophila* salivary gland chromosomes, suggesting that the chromatin remodeling activity of the Brm complex plays a general role in facilitating transcription by RNA polymerase II. Brm acts as a dominant suppressor of the rough eye phenotype that results from a hypomorphic mutation of *Drosophila* cyclin E by inhibiting S phase entry by acting downstream of cyclin E protein accumulation. The interaction of the Brm complex with chromatin may be modulated by BAP111, which is highly associated with the Brm complex in *Drosophila* embryos via an HMG domain. Brm is highly expressed in unfertilized eggs and early embryos.

CHROMOSOMAL LOCATION

Genetic locus: SMARCA2 (human) mapping to 9p24.3; Smarca2 (mouse) mapping to 19 C1.

SOURCE

Brm (H-56) is a rabbit polyclonal antibody raised against amino acids 1531-1586 mapping at the C-terminus of Brm 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.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-28710 X, 200 µg/0.1 ml.

APPLICATIONS

Brm (H-56) is recommended for detection of Brm 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).

Brm (H-56) is also recommended for detection of Brm in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Brm siRNA (h): sc-29831, Brm siRNA (m): sc-29834, Brm shRNA Plasmid (h): sc-29831-SH, Brm shRNA Plasmid (m): sc-29834-SH, Brm shRNA (h) Lentiviral Particles: sc-29831-V and Brm shRNA (m) Lentiviral Particles: sc-29834-V.

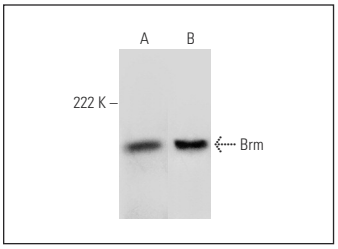
Brm (H-56) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Brm: 210 kDa.

STORAGE

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

DATA



Brm (H-56): sc-28710. Western blot analysis of Brm expression in U-937 (**A**) and THP-1 (**B**) nuclear extracts.

SELECT PRODUCT CITATIONS

1. Rao, M., et al. 2008. Inhibition of cyclin D1 gene transcription by Brg-1. Cell Cycle 7: 647-655.
2. Chuang, Y.S., et al. 2011. Promyelocytic leukemia protein in retinoic acid-induced chromatin remodeling of Oct4 gene promoter. Stem Cells 29: 660-669.
3. Yang, M., et al. 2011. Complex alternative splicing of the smarca2 gene suggests the importance of smarca2-B variants. J. Cancer 2: 386-400.
4. Wan, Y., et al. 2012. All-*trans* retinoic acid induces chromatin remodeling at the promoter of the mouse liver, bone, and kidney alkaline phosphatase gene in C3H10T 1/2 cells. Biochem. Genet. 50: 495-507.
5. Yang, Y., et al. 2013. Megakaryocytic leukemia 1 (MKL1) ties the epigenetic machinery to hypoxia-induced transactivation of endothelin-1. Nucleic Acids Res. 41: 6005-6017.
6. Riffo-Campos, Á.L., et al. 2015. Nucleosome-specific, time-dependent changes in histone modifications during activation of the early growth response 1 (Egr1) gene. J. Biol. Chem. 290: 197-208.

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.