SANTA CRUZ BIOTECHNOLOGY, INC.

Brm (N-19): sc-6450

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 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-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.

Blocking peptide available for competition studies, sc-6450 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-6450 X, 200 µg/0.1 ml.

APPLICATIONS

Brm (N-19) 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 (N-19) is also recommended for detection of Brm in additional species, including equine and avian.

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.

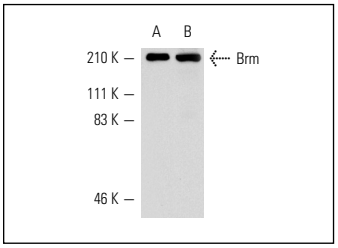
Brm (N-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Brm: 210 kDa.

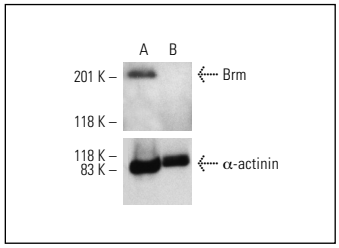
STORAGE

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

DATA



Brm (N-19): sc-6450. Western blot analysis of Brm expression in HeLa (**A**) and K-562 (**B**) nuclear extracts.



Brm siRNA (h): sc-29831. Western blot analysis of Brm expression in non-transfected control (**A**) and Brm siRNA transfected (**B**) HeLa cells. Blot probed with Brm (N-19): sc-6450. α-actinin (H-2): sc-17829 used as specificity and loading control.

SELECT PRODUCT CITATIONS

1. Soutoglou, E., et al. 2002. Coordination of PIC assembly and chromatin remodeling during differentiation-induced gene activation. Science 295: 1901-1904.
2. Wang, F., et al. 2010. Roles of coactivators in hypoxic induction of the erythropoietin gene. PLoS ONE 5: e10002.
3. Kanamaluru, D., et al. 2011. Arginine methylation by PRMT5 at a naturally occurring mutation site is critical for liver metabolic regulation by small heterodimer partner. Mol. Cell. Biol. 31: 1540-1550.
4. Flowers, S., et al. 2011. Tissue-specific gene targeting by the multiprotein mammalian DREAM complex. J. Biol. Chem. 286: 27867-27871.
5. Miao, J., et al. 2011. Ligand-dependent regulation of the activity of the orphan nuclear receptor, small heterodimer partner (SHP), in the repression of bile acid biosynthetic CYP7A1 and CYP8B1 genes. Mol. Endocrinol. 25: 1159-1169.
6. Yu, S., et al. 2011. GABP controls a critical transcription regulatory module that is essential for maintenance and differentiation of hematopoietic stem/progenitor cells. Blood 117: 2166-2178.

RESEARCH USE

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