

# Brm (24): sc-135850

## 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 co-activator 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.

## REFERENCES

1. Kal, A.J., et al. 2000. The *Drosophila* brahma complex is an essential coactivator for the trithorax group protein zeste. *Genes Dev.* 14: 1058-1071.
2. Papoulas, O., et al. 2001. The HMG-domain protein BAP111 is important for the function of the Brm chromatin-remodeling complex *in vivo*. *Proc. Natl. Acad. Sci. USA* 98: 5728-5733.
3. Brumby, A.M., et al. 2002. *Drosophila* cyclin E interacts with components of the brahma complex. *EMBO J.* 21: 3377-3389.
4. Armstrong, J.A., et al. 2002. The *Drosophila* Brm complex facilitates global transcription by RNA polymerase II. *EMBO J.* 21: 5245-5254.
5. Marena, D.R., et al. 2003. The *Drosophila* SNR1 (SNF5/INI1) subunit directs essential developmental functions of the brahma chromatin remodeling complex. *Mol. Cell. Biol.* 23: 289-305.

## CHROMOSOMAL LOCATION

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

## SOURCE

Brm (24) is a mouse monoclonal antibody raised against amino acids 1400-1586 of Brm of human origin.

## PRODUCT

Each vial contains 50 µg IgG<sub>1</sub> in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

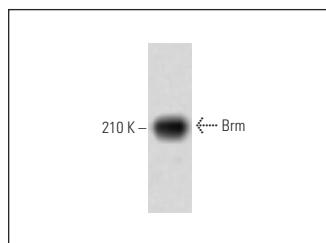
Brm (24) is recommended for detection of Brm of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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.

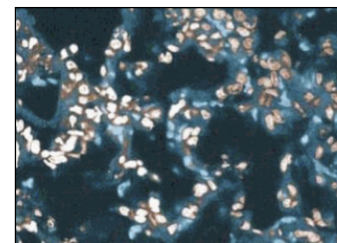
Molecular Weight of Brm: 210 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, NIH/3T3 whole cell lysate: sc-2210 or 3611-RF whole cell lysate: sc-2215.

## DATA



Brm (24): sc-135850. Western blot analysis of Brm expression in HeLa whole cell lysate.



Brm (24): sc-135850. Immunofluorescence staining of rabbit lung cells showing nuclear localization.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.