

Brg1 (E9O6E) Mouse mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, ChIP	H M R Mk	Endogenous	220	Mouse IgG2b	#P51532	6597

Product Usage Information

For optimal ChIP results, use 10 μ l of antibody and 10 μ g of chromatin (approximately 4×10^6 cells) per IP. This antibody has been validated using SimpleChIP[®] Enzymatic Chromatin IP Kits.

Application

Western Blotting
Immunoprecipitation
Chromatin IP

Dilution

1:1000
1:200
1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C . Do not aliquot the antibody.

Specificity/Sensitivity

Brg1 (E9O6E) Mouse mAb recognizes endogenous levels of total Brg1 protein. This antibody does not cross-react with BRM protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly10 of human Brg1 protein.

Background

The modulation of chromatin structure is an essential component in the regulation of transcriptional activation and repression. Modifications can be made by at least two evolutionarily conserved strategies, through the disruption of histone-DNA contacts by ATP-dependent chromatin remodelers, or by histone tail modifications including methylation and acetylation. One of the four classes of ATP-dependent histone remodelers is the SWI/SNF complex, the central catalytic subunit of which is Brg1 or the highly related protein hBRM (1). This SWI/SNF complex contains varying subunits but its association with either Brg1 or hBRM remains constant (1). SWI/SNF complexes have been shown to regulate gene activation, cell growth, the cell cycle, and differentiation (1). Brg1/hBRM have been shown to regulate transcription through enhancing transcriptional activation of glucocorticoid receptors (2). Although usually associated with transcriptional activation, Brg1/hBRM have also been found in complexes associated with transcriptional repression, including HDACs, Rb, and Tif1 β (3-5). Brg1/hBRM plays a vital role in the regulation of gene transcription during early mammalian embryogenesis. In addition, Brg1/hBRM also plays a role as a tumor suppressor and Brg1 is mutated in several tumor cell lines (6-8).

Background References

1. Trotter, K.W. and Archer, T.K. (2008) *Nucl Recept Signal* 6, e004.
2. Trotter, K.W. and Archer, T.K. (2007) *Mol Cell Endocrinol* 265-266, 162-7.
3. Sif, S. et al. (2001) *Genes Dev* 15, 603-18.
4. Zhang, H.S. et al. (2000) *Cell* 101, 79-89.
5. Underhill, C. et al. (2000) *J Biol Chem* 275, 40463-70.
6. Magnani, L. and Cabot, R.A. (2009) *Reproduction* 137, 23-33.
7. Medina, P.P. et al. (2008) *Epigenetics* 3, 64-8.
8. Medina, P.P. et al. (2008) *Hum Mutat* 29, 617-22.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **ChIP:** Chromatin IP

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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