Revision 1

Store at -20C

#3514

Brg1 (P680) Antibody

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H M R Mk	Endogenous	220	Rabbit	#P51532	6597

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

Brg1 (P680) Antibody detects endogenous levels of Brg1 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to amino acids surrounding Pro680 of human Brg1. Antibodies are purified by Protein A and peptide affinity chromatography.

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 Tif1β (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

WB: Western Blotting

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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