Revision 1

Store at -20C

#8829

SMARCC2/BAF170 Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk	Endogenous	162, 170	Rabbit	#Q8TAQ2	6601

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

SMARCC2/BAF170 Antibody recognizes endogenous levels of total SMARCC2/BAF170 protein (both isoforms 1 and 2).

Species predicted to react based on 100% sequence homology

Hamster, Bovine, Dog, Pig, Horse, Guinea Pig

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala223 of human SMARCC2/BAF170 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

ATP-dependent chromatin remodeling complexes play an essential role in the regulation of nuclear processes such as transcription and DNA replication and repair (1,2). The SWI/SNF chromatin remodeling complex consists of more than 10 subunits and contains a single molecule of either BRM or BRG1 as the ATPase catalytic subunit. The activity of the ATPase subunit disrupts histone-DNA contacts and changes the accessibility of crucial regulatory elements to the chromatin. The additional core and accessory subunits play a scaffolding role to maintain stability and provide surfaces for interaction with various transcription factors and chromatin (2-5). The interactions between SWI/SNF subunits and transcription factors, such as nuclear receptors, p53, Rb, BRCA1, and MyoD, facilitate recruitment of the complex to target genes for regulation of gene activation, cell growth, cell cycle, and differentiation processes (1,6-9).
SMARCC2/BAF170 is one of the core subunits of the SWI/SNF complex, which is necessary for efficient nucleosome remodeling by Brg1 *in vitro* (10). While SMARCC2/BAF170 has been shown to be part of the SWI/SNF complex in non-pluripotent cells, it is absent in pluripotent embryonic stem (ES) cells. Expression of SMARCC2/BAF170 has been shown to be up-regulated in neurons/neuronal progenitors upon differentiation of mouse ES cells with retinoic acid, and exogenous expression of SMARCC2/BAF170 leads to loss of stem cell pluripotency and self renewal (11).

Background References

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3. Eberharter, A. and Becker, P.B. (2004) *J Cell Sci* 117, 3707-11.
4. Bowman, G.D. (2010) *Curr Opin Struct Biol* 20, 73-81.
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6. Lessard, J.A. and Crabtree, G.R. (2010) *Annu Rev Cell Dev Biol* 26, 503-32.
7. Morettini, S. et al. (2008) *Front Biosci* 13, 5522-32.
8. Wolf, I.M. et al. (2008) *J Cell Biochem* 104, 1580-6.
9. Simone, C. (2006) *J Cell Physiol* 207, 309-14.
10. Phelan, M.L. et al. (1999) *Mol Cell* 3, 247-53.
11. Ho, L. et al. (2009) *Proc Natl Acad Sci U S A* 106, 5181-6.

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

Cross-Reactivity Key

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

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