

**SMARCC2/BAF170 (D8O9V) Rabbit mAb**

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

<b>Applications:</b> W, IP, ChIP, ChIP-seq, C&R	<b>Reactivity:</b> H M R Mk	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 162, 170	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #Q8TAQ2	<b>Entrez-Gene Id:</b> 6601
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**Product Usage Information**

For optimal ChIP and ChIP-seq results, use 10 µl of antibody and 10 µg of chromatin (approximately 4 x 10<sup>6</sup> cells) per IP. This antibody has been validated using SimpleChIP<sup>®</sup> Enzymatic Chromatin IP Kits.

The CUT&RUN dilution was determined using CUT&RUN Assay Kit #86652.

<b>Application</b>	<b>Dilution</b>
Western Blotting	1:1000
Immunoprecipitation	1:50
Chromatin IP	1:50
Chromatin IP-seq	1:50
CUT&RUN	1:50

**Storage**

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

**Specificity/Sensitivity**

SMARCC2/BAF170 (D8O9V) Rabbit mAb recognizes endogenous levels of total SMARCC2/BAF170 protein.

**Species predicted to react based on 100% sequence homology**

Dog, Pig, Horse, Guinea Pig

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ile818 of human SMARCC2/BAF170 protein.

**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. Research studies have shown that expression of SMARCC2/BAF170 is 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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6. Lessard, J.A. and Crabtree, G.R. (2010) *Annu Rev Cell Dev Biol* 26, 503-32.
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9. Simone, C. (2006) *J Cell Physiol* 207, 309-14.
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<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Western Blot Buffer</b>	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.
<b>Applications Key</b>	<b>W:</b> Western Blotting <b>IP:</b> Immunoprecipitation <b>ChIP:</b> Chromatin IP <b>ChIP-seq:</b> Chromatin IP-seq <b>C&amp;R:</b> CUT&RUN
<b>Cross-Reactivity Key</b>	<b>H:</b> Human <b>M:</b> Mouse <b>R:</b> Rat <b>Mk:</b> Monkey
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