#12760 Store at -20°C

SMARCC2/BAF170 (D8O9V) Rabbit mAb

☑ 100 µl
(10 western blots)

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Entrez-Gene ID #6601
Swiss-Prot Acc. #Q8TAQ2

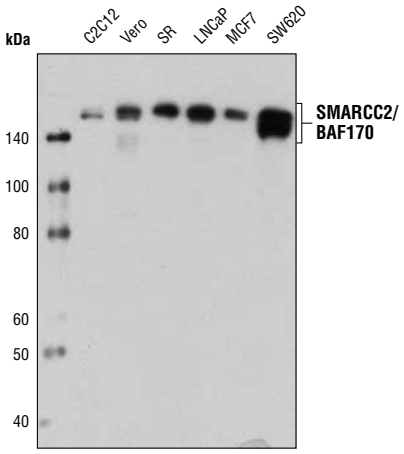
Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, ChIP Endogenous	H, M, R, Mk, (Dg, Pg, Hr)	162, 170 kDa	Rabbit IgG**

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).

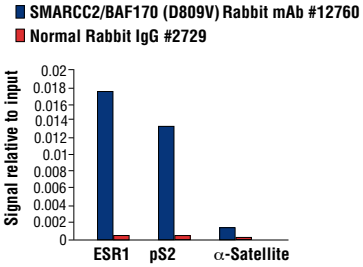
SMARCC2/BAF170 is one of the core subunits of the SWI/SNF complex, which is necessary for efficient nucleosome remodeling by Brg1 *in vitro* (10). While SMARCC2/BAF170 has been shown to be part of the SWI/SNF complex in non-pluripotent cells, it is absent in pluripotent embryonic stem (ES) cells. Research 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).

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

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



Western blot analysis of extracts from various cell lines using SMARCC2/BAF170 (D8O9V) Rabbit mAb.



Chromatin immunoprecipitations were performed with cross-linked chromatin from 4 x 10^6 MCF7 cells, grown in phenol red-free medium and 5% charcoal-stripped FBS for 4 d followed by treatment with β-estradiol (10 nM, 45 min), and either 10 µl of SMARCC2/BAF170 (D8O9V) Rabbit mAb or 2 µl of Normal Rabbit IgG #2729 using SimpleChIP® Enzymatic Chromatin IP Kit (Magnetic Beads) #9003. The enriched DNA was quantified by real-time PCR using SimpleChIP® Human ESR1 Promoter Primers #9673, SimpleChIP® Human pS2 Promoter Primers #9702, and SimpleChIP® Human α Satellite Repeat Primers #4486. The amount of immunoprecipitated DNA in each sample is represented as signal relative to the total amount of input chromatin, which is equivalent to one.

torage: 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.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:50
Chromatin IP	1:50

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended complementary products.

Background References:

(1) Ho, L. and Crabtree, G.R. (2010) *Nature* 463, 474-84.
(2) Becker, P.B. and Hörz, W. (2002) *Annu Rev Biochem* 71, 247-73.
(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.
(5) Gangaraju, V.K. and Bartholomew, B. (2007) *Mutat Res* 618, 3-17.
(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.
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(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.

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

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide
Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **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 **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.

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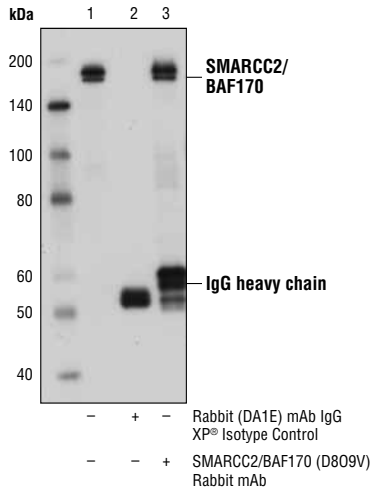

Immunoprecipitation of SMARCC2/BAF170 from PANC-1 cell extracts, using Rabbit (DA1E) mAb IgG XP® Isotype Control #3900 (lane 2) or SMARCC2/BAF170 (D8O9V) Rabbit mAb (lane 3). Lane 1 is 10% input. Western blot analysis was performed using SMARCC2/BAF170 (D8O9V) Rabbit mAb.

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