Revision 4

Store at -20C

#33360

SMARCE1/BAF57 (E6H5J) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, ChIP, C&R	H M R Mk	Endogenous	57	Rabbit IgG	#Q969G3	6605

Product Usage Information

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

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

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100
Chromatin IP	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

SMARCE1/BAF57 (E6H5J) Rabbit mAb recognizes endogenous levels of total SMARCE1/BAF57 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu34 of human SMARCE1/BAF57 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 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).

SMARCE1/BAF57 is a core component of the SWI/SNF complex and directly binds other transcription factors and co-factors, including androgen receptor and estrogen receptor. Binding of SMARCE1/BAF57 can directly affect the transcriptional activity of nuclear receptors, influencing the expression of target genes (9-12). Mutations of SMARCE1/BAF57 have been described in Coffin-Siris syndrome (13). SMARCE1/BAF57 has also been shown to contribute to invasion of some early-stage breast lesions by forming a complex with ILF3, an event independent of the SWI/SNF complex (14).

Background References

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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 **C&R:** CUT&RUN

Cross-Reactivity Key

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

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Limited Uses