Revision 1

Store at -20C

#8745

SMARCB1/BAF47 (D9C2) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk	Endogenous	44	Rabbit IgG	#Q12824	6598

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, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

SMARCB1/BAF47 (D9C2) Rabbit mAb recognizes endogenous levels of total SMARCB1/BAF47 protein.

Species predicted to react based on 100% sequence homology

Hamster, Chicken, Xenopus, Bovine

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gln244 of human SMARCB1/BAF47 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).
SMARCB1/BAF47, one of the core subunits of the SWI/SNF complex, is necessary for efficient nucleosome remodeling by BRG1 *in vitro* (10). SMARCB1/BAF47 is an essential part of the esBAF (mouse embryonic stem cell specific SWI/SNF complex) and is necessary for early embryogenesis and hepatocyte differentiation (11,12). In addition, SMARCB1/BAF47 is considered to be a tumor suppressor protein; inactivating mutations have been indentified in a large number of malignant rhabdoid tumors (13,14).

Background References

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12. Gresh, L. et al. (2005) *EMBO J* 24, 3313-24.
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14. Biegel, J.A. et al. (1999) *Cancer Res* 59, 74-9.

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 nonfat dry milk, 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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