Revision 1

Store at -20C

#62265

SMARCD3/BAF60C (D6F1S) Rabbit mAb

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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, IP	H M R Mk	Endogenous	60	Rabbit IgG	#Q6STE5	6604

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100

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

SMARCD3/BAF60A (D6F1S) Rabbit mAb recognizes endogenous levels of total SMARCD3/BAF60C protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human SMARCD3/BAF60C 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).
SMARCD3/BAF60C is essential for the development of the skeletal and cardiac muscle (10,11). Knockdown of SMARCD3/BAF60C using RNAi in mouse embryos leads to defects in heart development as well as abnormalities in the development of the cardiac and skeletal muscle, mimicking the cardiac defects observed in congenital heart disease (12). In addition, SMARCD3/BAF60C is part of the lipoBAF complex that remodels the chromaitn structure to activate lipogenic genes, promoting lipogenesis in response to feeding and insulin (13).

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.
8. Wolf, I.M. et al. (2008) *J Cell Biochem* 104, 1580-6.
9. Simone, C. (2006) *J Cell Physiol* 207, 309-14.
10. Puri, P.L. and Mercola, M. (2012) *Genes Dev* 26, 2673-83.
11. Vallaster, M. et al. (2012) *Acta Biochim Biophys Sin (Shanghai)* 44, 92-102.
12. Lickert, H. et al. (2004) *Nature* 432, 107-12.
13. Wang, Y. et al. (2013) *Mol Cell* 49, 283-97.

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

Cross-Reactivity Key

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

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