

DPF3/BAF45C (E7F7N) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H R	Endogenous	45, 47	Rabbit IgG	#Q92784	8110

Product Usage Information**Application**

Western Blotting
Immunoprecipitation

Dilution

1:1000
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

DPF3/BAF45C (E7F7N) Rabbit mAb recognizes endogenous levels of total DPF3/BAF45C protein. Based on sequence, this antibody should detect both DPF3a and DPF3b.

Species predicted to react based on 100% sequence homology

Mouse

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu146 of human DPF3/BAF45C 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). DPF3/BAF45C is a member of the SWI/SNF complex that binds to acetylated and methylated histone tails via its double PHD finger domains. There are two splice variants in human and mouse, DPF3a and DPF3b, which differ in their C-terminus as DPF3a contains a single truncated PHD finger. DPF3/BAF45C has been shown to be a key regulator in heart and muscle development, and its phosphorylation removes HEY transcriptional repressors to induce cardiac hypertrophy (9-11). DPF3 has also been implicated in brown adipogenesis and NF-κB signaling (12,13).

Background References

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12. Shapira, S.N. et al. (2017) *Genes Dev* 31, 660-73.
13. Ishizaka, A. et al. (2012) *J Biol Chem* 287, 11924-33.

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 **R:** Rat

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