

**SMARCAD1 Antibody**

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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	H	Endogenous	150	Rabbit	#Q9H4L7	56916

**Product Usage Information****Application**

Western Blotting

**Dilution**

1:1000

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

SMARCAD1 Antibody recognizes endogenous levels of total SMARCAD1 protein. This antibody also cross-reacts with a protein of unknown origin at 40 kDa.

**Species predicted to react based on 100% sequence homology**

Bovine, Pig

**Source / Purification**

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human SMARCAD1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

**Background**

SMARCAD1 is a SWI/SNF-like chromatin remodeling protein that plays a critical role in the maintenance of heterochromatin domains following DNA replication and proper chromosome segregation during mitosis (1-3). SMARCAD1 can be found in association with transcription repressor KAP1, histone deacetylases HDAC1/2, and lysine methyltransferase G9a/GLP, which are recruited to sites of DNA replication by PCNA. These proteins facilitate deacetylation of histones and methylation of histone H3 Lys9 to re-establish heterochromatin domains, such as centromeric regions (1). SMARCAD1 also plays a role in double stranded DNA break repair by facilitating DNA end resection and the subsequent repair by homologous recombination (4). Loss of SMARCAD1 results in increased sensitivity to DNA damaging agents, suggesting a role in the maintenance of genome stability.

**Background References**

1. Rowbotham, S.P. et al. (2011) *Mol Cell* 42, 285-96.
2. Mermoud, J.E. et al. (2011) *Cell Cycle* 10, 4017-25.
3. Jasencakova, Z. and Groth, A. (2011) *Mol Cell* 42, 267-9.
4. Costelloe, T. et al. (2012) *Nature* 489, 581-4.

**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

**Cross-Reactivity Key**

**H:** Human

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