Revision 1

Store at -20C

#13453

SNF2H Antibody

Cell Signaling TECHNOLOGY®

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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 Mk	Endogenous	125	Rabbit	#O60264	8467

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 and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

SNF2H Antibody recognizes endogenous levels of total SNF2H (SMARCA5) protein. This antibody does not cross-react with SMARCA1 protein.

Species predicted to react based on 100% sequence homology

Bovine, Dog, Pig, Horse, Guinea Pig

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala65 of human SNF2H (SMARCA5) protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Sucrose nonfermenting 2 homolog (SNF2H, SMARCA5) is one of two orthologs of the ISWI (imitation switch) ATPases encoded by the mammalian genome (1). SNF2H is part of the SNF2 family of chromatin remodeling factors that use ATP hydrolysis to catalyze biochemical reactions in several mammalian chromatin-remodeling complexes, including ACF1, RSF1, CHRAC, NoRC, WSTF, and WCRF180 (2). Research studies show that SNF2H is crucial for chromatin organization, DNA damage response, and differentiation (1-7). The SNF2H helicase facilitates DNA damage repair by actively moving nucleosomes for DNA damage response (DDR) proteins to effectively associate with damaged regions (3). Additional studies show that repair of double stranded breaks (DSBs) significantly decreases in the absence of SNF2H (3), and these cells become highly sensitive to DNA damage caused by x-rays and chemical treatments inducing DSBs (4,5).

Background References

1. Lazzaro, M.A. and Picketts, D.J. (2001) *J Neurochem* 77, 1145-56.
2. Kasten, M.M. et al. (2011) *Cell* 144, 310.e1.
3. Helfricht, A. et al. (2013) *Cell Cycle* 12, 3070-82.
4. Mueller, A.C. et al. (2013) *Oncogene* 32, 1164-72.
5. Lan, L. et al. (2010) *Mol Cell* 40, 976-87.
6. Smeenk, G. et al. (2013) *J Cell Sci* 126, 889-903.
7. Chioda, M. et al. (2010) *Development* 137, 3513-22.

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 **Mk:** Monkey

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