Revision 1

Store at -20C

#12024

Smurf2 (D8B8) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R Mk	Endogenous	80	Rabbit IgG	#Q9HAU4	64750

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50

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

Smurf2 (D8B8) Rabbit mAb recognizes endogenous levels of total Smurf2 protein. This antibody also cross-reacts with proteins of unknown origin at 250 and 46 kDa in some cell lines.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro160 of human Smurf2 protein.

Background

Smad ubiquitin regulatory factor 2 (Smurf2) is a HECT domain E3 ubiquitin ligase. It was initially identified as an inhibitor of TGF-β/BMP signaling by targeting R-Smads and TGF type I receptor for ubiquitination and degradation (1-3). Subsequent studies have revealed its role in neuronal and planar cell polarity, as well as in the senescence response and suppression of tumorigenesis (4-8). Smurf2 has a broad range of substrates including RUNX2, AMSH, Rap1B, and RNF11 (5,9-11). Smurf2 is widely expressed in various tissues. The C2 domain of Smurf2 inhibits its catalytic activity by interacting with the HECT domain (12). Research studies have shown that Smurf2 functions as a tumor suppressor by maintaining genomic stability through targeting RNF20 (13).

Background References

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2. Kavsak, P. et al. (2000) *Mol Cell* 6, 1365-75.
3. Izzi, L. and Attisano, L. (2004) *Oncogene* 23, 2071-8.
4. Zhang, H. and Cohen, S.N. (2004) *Genes Dev* 18, 3028-40.
5. Schwamborn, J.C. et al. (2007) *EMBO J* 26, 1410-22.
6. Narimatsu, M. et al. (2009) *Cell* 137, 295-307.
7. Nie, J. et al. (2010) *J Biol Chem* 285, 22818-30.
8. Ramkumar, C. et al. (2012) *Cancer Res* 72, 2714-9.
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10. Li, H. and Seth, A. (2004) *Oncogene* 23, 1801-8.
11. Kaneki, H. et al. (2006) *J Biol Chem* 281, 4326-33.
12. Wiesner, S. et al. (2007) *Cell* 130, 651-62.
13. Blank, M. et al. (2012) *Nat Med* 18, 227-34.

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 **IP:** Immunoprecipitation

Cross-Reactivity Key

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

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