

**PTCH2 (L849) 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, IP	H	Transfected Only	130	Rabbit	#Q9Y6C5	8643

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

Western Blotting  
Immunoprecipitation

**Dilution**

1:1000  
1:50

**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**

PTCH2 (L849) Antibody detects transfected levels of PTCH2 protein. It does not recognize transfected levels of human PTCH1. This antibody also cross-reacts with an unidentified protein at 55 kDa.

**Source / Purification**

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to a region (predicted to be extracellular) surrounding residue Leu849 of human PTCH2. Antibodies are purified by protein A and peptide affinity chromatography.

**Background**

Patched1 and 2 (PTCH1 and PTCH2) are twelve-pass transmembrane proteins that function as the receiving receptors for members of the Hedgehog family of proteins (1-4). In the absence of Hedgehog proteins, PTCH suppresses the otherwise constitutively active signaling receptor Smoothened (Smo) so that the Hedgehog signaling pathway is in the off state (5,6). Deactivating mutations that impair the ability of PTCH1 to suppress Smo are frequently found in patients with nevoid basal cell carcinoma syndrome (7,8). PTCH proteins have a sterol-sensing domain (SSD) also found in several proteins that function in cholesterol homeostasis, such as HMGCR (3-hydroxy-3-methylglutaryl coenzyme A-reductase) and SCAP (sterol regulatory element-binding protein-cleavage activating protein). However, the role of the SSD in Patched proteins is not clear (9,10).

**Background References**

1. Stone, D.M. et al. (1996) *Nature* 384, 129-134.
2. Chen, Y. and Struhl, G. (1996) *Cell* 87, 553-563.
3. Motoyama, J. et al. (1998) *Nat. Genet.* 18, 104-106.
4. Smyth, I. et al. (1999) *Hum. Mol. Genet.* 8, 291-297.
5. Ingham, P.W. and McMahon, A.P. (2001) *Genes Dev.* 15, 3059-3087.
6. McMahon, A.P. et al. (2003) *Curr. Top. Dev. Biol.* 53, 1-114.
7. Hahn, H. et al. (1996) *Cell* 85, 841-851.
8. Johnson, R.L. et al. (1996) *Science* 272, 1668-1671.
9. Kuwabara, P.E. and Labouesse, M. (2002) *Trends Genet.* 18, 193-201.
10. Chang, T.Y. et al. (2006) *Annu. Rev. Cell Dev. Biol.* 22, 129-157.

**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

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