

PTCH2 (L849) Antibody

✓ 100 µl
(10 Western mini-blot)

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This product is for *in vitro* research use only and is not intended for use in humans or animals.
This product is not intended for use as a therapeutic or in diagnostic procedures.

Entrez-Gene ID #8643
Swiss-Prot Acc. #Q9Y6C5

Applications W, IP Transfected	Species Cross-Reactivity* H	Molecular Wt. 130 kDa	Source Rabbit**
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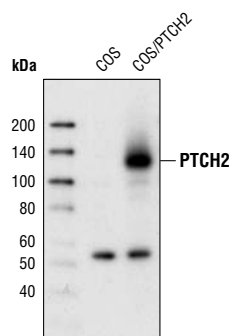
Background: Patched1 (PTCH1) and PTCH2 are twelve-pass transmembrane proteins that function as the receiving receptors for the members of the Hedgehog family proteins (1–4). In the absence of Hedgehog proteins, PTCH suppresses the otherwise constitutively active signaling receptor Smoothened (Smo) so 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 (NBCCS) (7,8). PTCH proteins have a sterol-sensing domain (SSD) that is also found in several proteins with known function in cholesterol homeostasis, such as HMGCR (3-hydroxy-3-methylglutaryl coenzyme A-reductase) and SCAP (the sterol regulatory element-binding protein (SREBP)-cleavage activating protein). However, the role of SSD in Patched proteins is not clear (9,10).

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 (KLH-coupled) 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 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.



Western blot analysis of total cell lysates from COS cells and COS cells transiently transfected with a construct expressing human PTCH2 using PTCH2 (L849) Antibody.

- (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.

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.

*Species cross-reactivity is determined by Western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000
Immunoprecipitation 1:50

For application specific protocols please see the web page for this product at www.cellsignal.com.

Companion Products:

- Shh/Ihh Antibody #2271
- Shh Antibody #2287
- Phototope®-HRP Western Blot Detection System, Anti-rabbit IgG, HRP-linked Antibody #7071
- Anti-rabbit IgG, HRP-linked Antibody #7074
- Prestained Protein Marker, Broad Range (Premixed Format) #7720
- Biotinylated Protein Ladder Detection Pack #7727
- 20X LumiGLO® Reagent and 20X Peroxide #7003

Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For Western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebra fish B—bovine
Dg—dog Pg—pig Sc—S. cerevisiae All—all species expected Species enclosed in parentheses are predicted to react based on 100% sequence homology.