

This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

100 µl
 (10 western blots)

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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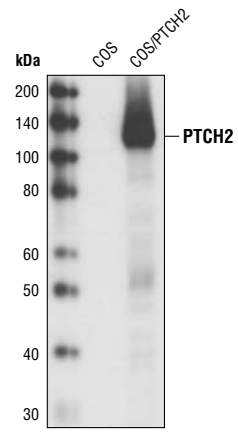
Background: Patched1 and 2 (PTCH1 and PTCH2) are twelve-pass transmembrane proteins that function as the receiving receptors for members of the Hedgehog family of proteins (1-4). In the absence of Hedgehog proteins, PTCH suppresses the otherwise constitutively active signaling receptor Smoothened (Smo) 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).

Specificity/Sensitivity: PTCH2 (G1191) Antibody detects transfected levels of PTCH2 protein. It does not recognize transfected levels of human PTCH1 protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to a region (predicted to be intracellular) surrounding residue Gly1191 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.
- (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.



Western blot analysis of extracts from COS cells, untransfected or transiently transfected with a construct expressing human PTCH2, using PTCH2 (G1191) Antibody.

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.

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—zebrafish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.