

#2287 Store at -20°C

# Shh Antibody

✓ 100 µl  
(10 Western mini-blot)



**Orders** ■ 877-616-CELL (2355)  
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rev. 09/12/08

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 #6469  
Swiss-Prot Acc. #Q15465

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP Transfected	H, M	19 kDa, 42 kDa, 45 kDa	Rabbit**

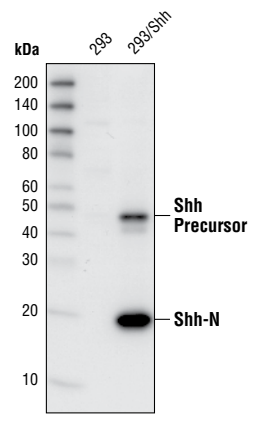
**Background:** Hedgehogs (Hh) are secreted signaling proteins that play many roles during animal development and aberrant Hh signaling activity is associated with numerous birth defects. Uncontrolled activation of Hh pathway is linked to the development of several types of cancers (1–2). There are three Hh genes in vertebrates: Sonic (Shh), Indian (Ihh) and Desert (Dhh), which have distinct as well as overlapping roles (3–5). Hh proteins are synthesized as precursors of 45 kDa. The precursors undergo auto-cleavage to generate an amino-terminal peptide (Hh-N) of 19 kDa and a carboxy-terminal peptide (Hh-C). During this process, a cholesterol molecule is covalently attached to the carboxy terminus of Hh-N and then Hh-N is further modified by acetylation at its amino terminus. This dual modified Hh-N is released from cells and responsible for all known Hedgehog signaling activity (6).

**Specificity/Sensitivity:** Shh antibody detects both the precursor and mature forms of transfected Shh.

**Source/Purification:** Polyclonal antibodies are produced by immunizing rabbits with a synthetic peptide (KLH-coupled) corresponding to residues surrounding His35 of human Shh. Antibodies are purified by protein A and peptide affinity chromatography.

### Background References:

- (1) Ingham, P.W. and McMahon, A.P. (2001) *Genes Dev.* 15, 3059–3087.
- (2) McMahon, A.P. et al. (2003) *Curr. Top Dev. Biol.* 53, 1–114.
- (3) Zhang, X.M. et al. (2001) *Cell* 106, 781–792.
- (4) Adolphe, C. et al. (2004) *Development* 131, 5009–5019.
- (5) Pathi, S. et al. (2001) *Mech. Dev.* 106, 107–117.
- (6) Bijlsma, M.F. et al. (2004) *Bioessays* 26, 387–394.



Western blot analysis of total cell lysates from 293 cells and 293 cells transiently transfected with mouse Shh construct, using Shh 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](http://www.cellsignal.com).

**Companion Products:**  
Shh/Ihh Antibody #2271  
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](http://www.cellsignal.com) for a complete listing of recommended companion products.

**IMPORTANT: For Western blots, incubate membrane with diluted 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 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% homology.