

Shh/Ihh Antibody

✓ 100 µl
(10 western blots)

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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.

Entrez-Gene ID #6469
Swiss-Prot Acc. #Q15465

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W transfected	M, (H, R)	19 kDa, (42 kDa, 45 kDa)	Rabbit**

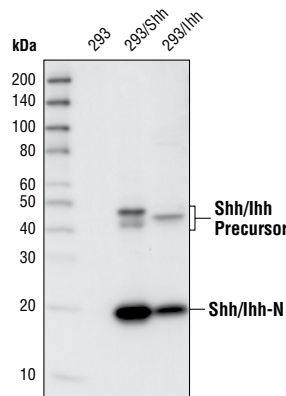
Background: Hedgehog proteins (Hh) are secreted signaling proteins that play many roles during animal development. Aberrant Hh signaling activity can be associated with numerous birth defects and uncontrolled Hh pathway activation is linked to the development of several types of cancers (1-2). The three identified vertebrate Hh genes are Sonic (Shh), Indian (Ihh) and Desert (Dhh), all of which have distinct as well as overlapping roles (3-5). Hh proteins are synthesized as 45 kDa precursors that undergo auto-cleavage to generate a 19 kDa amino-terminal peptide (Hh-N) and a carboxy-terminal peptide (Hh-C). The amino-terminal peptide becomes covalently attached to a cholesterol molecule at its carboxy terminus and acetylated at its amino terminus. This doubly modified Hh-N peptide is released from cells and responsible for all known Hedgehog signaling activity (6).

Specificity/Sensitivity: Shh/Ihh antibody detects both the precursor and mature forms of transfected Shh and transfected Ihh. It is also expected to recognize Shh from cat, dog, chicken and zebra fish based on homology.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Glu71 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 or Ihh construct, using Shh/Ihh 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

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 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—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.