

Store at
-20°C

Mouse Sonic Hedgehog (Shh) Recombinant Protein

#51772

25 µg

Cell Signaling
TECHNOLOGY®Support: +1-978-867-2388 (U.S.)
www.cellsignal.com/supportOrders: 877-616-2355 (U.S.)
orders@cellsignal.comEntrez-Gene ID #20423
UniProt ID #Q62226

For Research Use Only. Not For Use In Diagnostic Procedures.

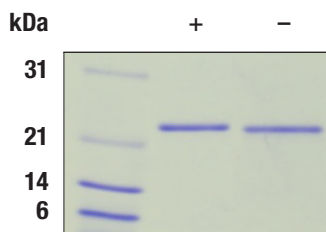
Background: Hedgehog proteins (Hh) are secreted signaling proteins that play many roles during animal development. Aberrant Hh signaling activity can be associated with numerous birth defects and uncontrolled Hh pathway activation is linked to the development of several types of cancers (1-2). The three 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). Hh-N 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).

Molecular Weight: 19.8 kDa

Endotoxin: Endotoxin levels are \leq 1 EU / 1 µg mShh.

Purity: \geq 95% purity was determined by SDS-PAGE.

Source/Purification: Recombinant mouse Shh was expressed in *E. coli* and is supplied in a lyophilized form.



The purity of Mouse Sonic Hedgehog (Shh) Recombinant Protein was determined by SDS-PAGE of 1 µg reduced (+) and non-reduced (-) recombinant mShh and staining with Coomassie Blue.

Storage: Mouse Sonic Hedgehog (Shh) Recombinant Protein is supplied as lyophilized material that is very stable at -20°C. It is recommended to reconstitute with sterile water at a concentration of 0.1 mg/mL which can be further diluted in aqueous solutions as needed. Addition of a carrier protein (0.1% HSA or BSA) is recommended for long-term storage.

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.

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA—Peptide **Species Cross-Reactivity:** 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.