

# Shh

Catalog # PVGS1173

## Product Information

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<b>Primary Accession Species</b>	<a href="#">Q15465</a> Human
<b>Sequence</b>	Ile22-Gly197 (Ala23Val, Cys24Ile)
<b>Purity</b>	> 98% as analyzed by SDS-PAGE > 98% as analyzed by HPLC
<b>Endotoxin Level Biological Activity</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by inducing alkaline phosphatase production of murine C3H/10T1/2 cells is less than 1.0 µg/ml, corresponding to a specific activity of > 1.0 × 10 <sup>3</sup> IU/mg.
<b>Expression System</b>	E. coli
<b>Theoretical Molecular Weight</b>	19.8 kDa
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in 20 mM PB, pH 7.4, 150 mM NaCl.
<b>Reconstitution</b>	It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/ml.
<b>Storage &amp; Stability</b>	Upon receiving, this product remains stable for up to 6 months at -70°C or -20°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. Avoid repeated freeze-thaw cycles.

## Additional Information

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<b>Gene ID</b>	6469
<b>Other Names</b>	Sonic hedgehog protein, SHH, 3.1.-., HHG-1, Shh unprocessed N-terminal signaling and C-terminal autoprocessing domains, ShhNC, Sonic hedgehog protein N-product, ShhN, Shh N-terminal processed signaling domains, ShhNp, SHH ( <a href="#">HGNC:10848</a> )
<b>Target Background</b>	Members of the Hedgehog (Hh) family are highly conserved proteins which are widely represented throughout the animal kingdom. The three known mammalian Hh proteins, Sonic (Shh), Desert (Dhh) and Indian (Ihh) are structurally related and share a high degree of amino-acid sequence identity (e.g., Shh and Ihh are 93% identical). The biologically active form of Hh molecules is obtained by autocatalytic cleavage of their precursor proteins and corresponds to approximately the N-terminal one half of the precursor

molecule. Although Hh proteins have unique expression patterns and distinct biological roles within their respective regions of secretion, they use the same signaling pathway and can substitute for each other in experimental systems.

## Protein Information

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<b>Name</b>	SHH ( <a href="#">HGNC:10848</a> )
<b>Function</b>	[Sonic hedgehog protein]: The C-terminal part of the sonic hedgehog protein precursor displays an autoproteolysis and a cholesterol transferase activity (By similarity). Both activities result in the cleavage of the full-length protein into two parts (ShhN and ShhC) followed by the covalent attachment of a cholesterol moiety to the C-terminal of the newly generated ShhN (By similarity). Both activities occur in the endoplasmic reticulum (By similarity). Once cleaved, ShhC is degraded in the endoplasmic reticulum (By similarity).
<b>Cellular Location</b>	[Sonic hedgehog protein]: Endoplasmic reticulum membrane. Golgi apparatus membrane. Secreted Note=Co-localizes with HHAT in the ER and Golgi membrane

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