

## Active Recombinant Mouse Shh

**Cat. No.** Shh-9029M    **Lot. No.** (See product label)

### SPECIFICATION

<b>Product Overview</b>	Recombinant CHO Cells derived Human Sonic HedgeHog is a 20.0 kDa protein consisting of 176 amino acid residues, including an N-terminal Ile-Val-Ile sequence substituted for the natural occurring chemically modified Cys residue.
<b>Species</b>	Mouse
<b>Source</b>	CHO
<b>Description</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.
<b>Form</b>	Lyophilized after extensive dialysis against PBS.
<b>Bio-activity</b>	ED50 < 1 μg/ml, measured by its ability to induce alkaline phosphatase production by ccl-226 cells, corresponding to a specific activity of >1 x 10 <sup>3</sup> units/mg.
<b>Molecular Mass</b>	20 kDa, observed by non-reducing SDS-PAGE.

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

<b>AA Sequence</b>	Cys25-Gly198.
<b>Endotoxin</b>	< 0.2="" eu/μg,="" determined="" by="" la="" >
<b>Purity</b>	>95% as analyzed by SDS-PAGE and HPLC.
<b>Storage</b>	Lyophilized recombinant protein remains stable up to 6 months at -80°C from date of receipt. Upon reconstitution, rmSHH should be stable up to 1 week at 4°C or up to 2 months at -20°C.
<b>Reconstitution</b>	Reconstituted in ddH <sub>2</sub> O or PBS at 100 μg/ml.

## GENE INFORMATION

<b>Gene Name</b>	Shh sonic hedgehog [ <i>Mus musculus</i> ]
<b>Official Symbol</b>	Shh
<b>Synonyms</b>	SHH; sonic hedgehog; sonic hedgehog protein; HHG-1; short digits; hemimelic extra toes; Hx; Dsh; Hhg1; Hxl3; M100081; 9530036O11Rik;
<b>Gene ID</b>	<a href="#">20423</a>
<b>mRNA Refseq</b>	<a href="#">NM_009170</a>
<b>Protein Refseq</b>	<a href="#">NP_033196</a>
<b>UniProt ID</b>	<a href="#">Q62226</a>
<b>Pathway</b>	Basal cell carcinoma, organism-specific biosystem; Basal cell carcinoma, conserved biosystem; Dopaminergic Neurogenesis, organism-specific biosystem; Hedgehog

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Signaling Pathway, organism-specific biosystem; Hedgehog signaling pathway, organism-specific biosystem; Hedgehog signaling pathway, conserved biosystem; Pathways in cancer, organism-specific biosystem;

**Function**

calcium ion binding; glycoprotein binding; glycosaminoglycan binding; NOT hydrolase activity; laminin-1 binding; patched binding; patched binding; peptidase activity; protein binding; signal transducer activity; zinc ion binding;

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