

Active Recombinant Mouse Shh

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

SPECIFICATION

Product Overview	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.
Species	Mouse
Source	CHO
Description	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.
Form	Lyophilized after extensive dialysis against PBS.
Bio-activity	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 ³ units/mg.
Molecular Mass	20 kDa, observed by non-reducing SDS-PAGE.

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AA Sequence	Cys25-Gly198.
Endotoxin	< 0.2 EU/μg, as determined by LAL>
Purity	>95% as analyzed by SDS-PAGE and HPLC.
Storage	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.
Reconstitution	Reconstituted in ddH ₂ O or PBS at 100 μg/ml.

GENE INFORMATION

Gene Name	Shh sonic hedgehog [<i>Mus musculus</i>]
Official Symbol	Shh
Synonyms	SHH; sonic hedgehog; sonic hedgehog protein; HHG-1; short digits; hemimelic extra toes; Hx; Dsh; Hhg1; Hxl3; M100081; 9530036O11Rik;
Gene ID	20423
mRNA Refseq	NM_009170
Protein Refseq	NP_033196
UniProt ID	Q62226
Pathway	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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