

SHH Protein, Mouse (HEK293, His)

Cat. No.:	HY-P73418
Synonyms:	Sonic Hedgehog Protein; SHH; HHG-1; ShhNC
Species:	Mouse
Source:	HEK293
Accession:	Q62226 (C25-G198)
Gene ID:	20423
Molecular Weight:	Approximately 23 kDa

PROPERTIES

Biological Activity	Measured by its ability to induce alkaline phosphatase production by C3H10T1/2 mouse embryonic fibroblast cells. The ED ₅₀ for this effect is typically 3.6-40 µg/mL.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	The sonic hedgehog protein (SHH) precursor undergoes autoproteolysis and cholesterol transferase activity, resulting in the cleavage of the protein into two parts, ShhN and ShhC. The newly generated ShhN is then covalently attached with a cholesterol moiety at its C-terminal. This process occurs in the endoplasmic reticulum. ShhC is subsequently degraded in the endoplasmic reticulum. The lipidated ShhNp acts as a morphogen and plays a crucial role in various developmental patterning events. It induces ventral cell fate in the neural tube and somites, participates in the anterior-posterior axis patterning of the limb bud, and is essential for axon guidance. SHH binds to the patched (PTCH1) receptor, which, in association with smoothened (SMO), activates the transcription of target genes. In the absence of SHH, PTCH1 represses the constitutive signaling activity of SMO.
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Caution: Product has not been fully validated for medical applications. For research use only.

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