

SHH, Human, Recombinant

Cat. No. : PCK215

General Information

Synonyms	Sonic Hedgehog Protein;SHH;HHG-1
Species	Human
Expression host	E.coli
Sequence	Cys24-Gly197
Accession	Q15465
Mol mass	19.69 kDa
Expiration date	12 months

Product feature

Purity	> 95% as determined by reducing SDS-PAGE.
Endotoxin (EU/μg)	< 0.1
Storage	Lyophilized protein should be stored at -5~-20°C, stable for one year after receipt. Reconstituted protein solution can be stored at 2-8°C for 2-7 days. Aliquots of reconstituted samples are stable at -5~-20°C for 3 months.
Shipping	Ice bag
Formulation	Lyophilized from a 0.2 μm filtered solution of 20 mM PB, 100 mM NaCl, 1 mM DTT, pH 7.5.
Reconstitution	Always centrifuge tubes before opening. Do not mix by vortex or pipetting. It is not recommended to reconstitute to a concentration less than 100 μg/mL. Dissolve the lyophilized protein in sterile water. Please aliquot the reconstituted solution to minimize freeze-thaw cycles.

Background

Sonic Hedgehog Homolog (SHH) belongs to a three-Protein family called hedgehog. The other two family members are Indian Hedgehog (IHH) and Desert Hedgehog (DHH). Hedgehog Proteins are key signaling molecules in embryonic development. SHH is expressed in various embryonic tissues and plays critical roles in regulating the patterning of many systems, such as limbs and brain. SHH also plays an important role in adult, including the division of adult stem cells and the development of certain cancers and other diseases. Human SHH is expressed as a 45kDa precursor, and undergoes a series of processing during secretion. After the removal of the signal peptide, a protease within the C-terminal domain catalyzes the cleavage of SHH into a 20 kDa N-terminal signaling domain (SHH-N) and a 25 kDa C-terminal domain (SHH-C). SHH-N has the "all signaling" capability. SHH-N binds to the 12 pass transmembrane Protein Patched (Ptc) on cell surface, which releases the repression of the activity of Smoothened (Smo), a G-Protein coupled Receptor, by Ptc.

SDS-PAGE

