Recombinant Human Sonic Hedgehog/SHH Protein (C24II)

Catalog No. PKSH033518

Note: Centrifuge before opening to ensure complete recovery of vial contents.

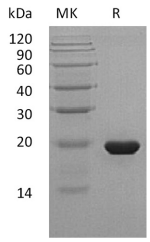
Description

Synonyms	Sonic Hedgehog Protein;SHH;HHG-1;SHH
Species	Human
Expression Host	E.coli
Sequence	Cys24-Gly197(Cys24Ile-Ile)
Accession	Q15465
Calculated Molecular Weight	19.8 kDa
Observed molecular weight	20 kDa
Tag	None
Bioactivity	Not validated for activity

Properties

Purity	> 95 % as determined by reducing SDS-PAGE.
Endotoxin	< 0.01 EU per μg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 95 % as determined by reducing SDS-PAGE.

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

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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.

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