**Datasheet**

**Human Sonic Hedgehog / Shh Protein**

**Catalog #** SH7-H5229

For Research and Further Cell Culture Manufacturing Use

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**Description**

**Source**
Human Sonic Hedgehog, His Tag (SH7-H5229) is expressed from human 293 cells (HEK293). It contains AA Cys 24 - Gly 197 (Accession # NP_000184). Predicted N-terminus: Cys 24

**Predicted N-terminus**
Cys 24

**Protein Structure**

Sonic Hedgehog (Cys 24 - Gly 197) NP_000184 Poly-his

**Molecular Characterization**
This protein carries a polyhistidine tag at the C-terminus. The protein has a calculated MW of 20.4 kDa. The protein migrates as 22 kDa on a SDS-PAGE gel under reducing (R) condition.

**Endotoxin**
Less than 1.0 EU per μg by the LAL method.

**Purity**
>95% as determined by SDS-PAGE.

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**Formulation and Storage**

**Formulation**
Lyophilized from 0.22 μm filtered solution in PBS, pH7.4. Normally trehalose is added as protectant before lyophilization.

Contact us for customized product form or formulation.

**Reconstitution**
Please see Certificate of Analysis for specific instructions. For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

**Storage**
For long term storage, the product should be stored at lyophilized state at -20°C or lower. Please avoid repeated freeze-thaw cycles.

No activity loss was observed after storage at:
- 4-8°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

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**Background**

Sonic hedgehog protein (SHH) is also known as HHG-1, which belongs to the hedgehog family. SHH is expressed in fetal intestine, liver, lung, and kidney and not expressed in adult tissues. Sonic hedgehog protein can be cleavage into sonic hedgehog protein N-product and sonic hedgehog protein C-product by autolysis. SHH binds to the patched (PTC) receptor, which functions in association with smoothened (SMO), to activate the transcription of target genes. In the absence of SHH, PTC represses the constitutive signaling activity of SMO. Also regulates another target, the gli oncogene. Inter cellular signal essential for a variety of patterning events during development. The C-terminal domain displays an autoproteolysis activity and a cholesterol transferase activity. The N-product is the active species in both local and long-range signaling, whereas the C-product has no signaling activity.

**References**


Please contact us at TechSupport@acrobiosystems.com, if you have any questions about this product.
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Assay Data

SDS-PAGE Data

Human Sonic Hedgehog, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.