Data Sheet (Cat.No.TMPJ-01170)

TargetMol

SHH Protein, Mouse, Recombinant

General Information

Synonyms:	HHG-1;Sonic Hedgehog Protein;SHH
Protein Construction:	Cys25-Gly198 (Cys25Ile-Val-Ile)
Species:	Mouse
Expression Host:	E. coli
Accession:	Q62226
Molecular Weight:	19.8 kDa (reducing condition)
AA Sequence:	Cys25-Gly198 (Cys25Ile-Val-Ile)

QC Testing

Biological Activity:	ED50 < 1.0 μg/ml, measured by its ability to induce alkaline phosphatase production by C3H/10T1/2 (CCL-226) Cells, corresponding to a specific activity of > 1.0 × 10^3 U/mg.
Purity:	Greater than 95% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.2 EU/μg of protein as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Mouse 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.Mouse Shh is

synthesized as a 437 aa precursor that contains a 24 aa signal sequence and a 413 aa mature region. The mature region is autocatalytically processed into a nonglycosylated, 20 kDa, 174 aa N-terminal fragment (Shh-N), and a catalytic-processing,glycosylated, 34 kDa, 239 aa C-terminal fragment. The 20 kDa Shh-N fragment is the core of the active hedgehog molecule. Mouse Shh-N is 99%, 98%, and 100% aa identical to human, rat and gerbil Shh-N, respectively.

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