

## Recombinant Mouse Sonic Hedgehog/SHH (C25II) Protein

**Catalog Number: PKSM041278**

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

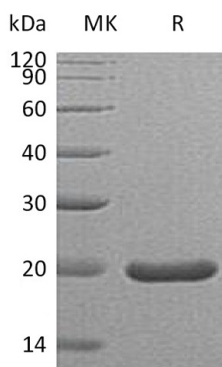
### Description

<b>Species</b>	Mouse
<b>Source</b>	E.coli-derived Mouse Sonic Hedgehog/SHH protein Cys25-Gly198(Cys25Ile-Ile)
<b>Calculated MW</b>	19.8 kDa
<b>Observed MW</b>	18-20 kDa
<b>Accession</b>	Q62226
<b>Bio-activity</b>	Not validated for activity

### Properties

<b>Purity</b>	> 95 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 0.01 EU per µg of the protein as determined by the LAL method.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution of 20mM PB, 150mM NaCl, 1mM DTT, pH 7.4. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

### Data



### 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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