

## Active Recombinant Mouse Shh Protein (C25II) (175 aa)

**Cat. No.** Shh-311S    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant mouse Sonic Hedgehog (C25II) (rmShh) produced in E. coli is a single non-glycosylated polypeptide chain containing 175 amino acids. A fully biologically active molecule, rmShh has a molecular mass of 19.7 kDa analyzed by reducing SDS-PAGE and is obtained by proprietary chromatographic techniques.                                                                                                                                                                                                                                                                                           |
| <b>Species</b>          | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>ProteinLength</b>    | 175                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Description</b>      | Sonic Hedgehog (Shh) is a member of the Hedgehog (Hh) family of highly conserved proteins which are widely represented throughout the animal kingdom. In mammal, there are three related Hh proteins, Sonic (Shh), Desert (Dhh) and Indian (Ihh). They share a high degree of amino-acid sequence identity (e.g., Shh and Ihh are 93% identical). Sonic Hedgehog plays a role in cell growth, cell specialization, and the normal shaping (patterning) of the body. Shh is also important for development of the brain and spinal cord (central nervous system), eyes, limbs, and many other parts of the body. |
| <b>Form</b>             | Sterile Filtered White lyophilized (freeze-dried) powder.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Bio-activity</b>     | ED50 < 2.0 µg/mL, measured by its ability to induce alkaline phosphatase production by C3H/10T1/2 (CCL-226) Cells, corresponding to a specific activity of > 500 units/mg.                                                                                                                                                                                                                                                                                                                                                                                                                                      |

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|                       |                                                                                                                                                                                                                                                   |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Molecular Mass</b> | 19.7 kDa, observed by reducing SDS-PAGE.                                                                                                                                                                                                          |
| <b>AA Sequence</b>    | IIGPGRGFGKRRHPKKLTPLAYKQFIPNVAEKTLGASGRYEGKITRNSERFKELTPNY<br>NPDIIFKDEENTGADRLMTQRCKDKLNALAISVMNQWPGVKLRVTEGWDEDGHHSE<br>ESLHYEGRAVDITTSRDRSKYGMLARLAVEAGFDWVYYESKAHIHCSVKAENSV<br>AKSGG                                                         |
| <b>Endotoxin</b>      | < 0.2 EU/μg, determined by LAL method.                                                                                                                                                                                                            |
| <b>Purity</b>         | > 95% by SDS-PAGE and HPLC analyses.                                                                                                                                                                                                              |
| <b>Storage</b>        | Lyophilized recombinant mouse Sonic Hedgehog (C25II) (rmShh) remains stable up to 6 months at -80 centigrade from date of receipt. Upon reconstitution, rmShh should be stable up to 2 weeks at 4 centigrade or up to 3 months at -20 centigrade. |
| <b>Storage Buffer</b> | Lyophilized after extensive dialysis against PBS.                                                                                                                                                                                                 |
| <b>Reconstitution</b> | Reconstituted in ddH <sub>2</sub> O at 100 μg/mL.                                                                                                                                                                                                 |

## GENE INFORMATION

|                        |                                                                                                                                      |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | Shh sonic hedgehog [ <i>Mus musculus</i> ]                                                                                           |
| <b>Official Symbol</b> | Shh                                                                                                                                  |
| <b>Synonyms</b>        | SHH; sonic hedgehog; sonic hedgehog protein; HHG-1; short digits; hemimelic extra toes; Hx; Dsh; Hhg1; Hxl3; M100081; 9530036O11Rik; |
| <b>Gene ID</b>         | 20423                                                                                                                                |
| <b>mRNA Refseq</b>     | NM_009170                                                                                                                            |

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|----------------|-----------|
| Protein Refseq | NP_033196 |
|----------------|-----------|

|            |        |
|------------|--------|
| UniProt ID | Q62226 |
|------------|--------|

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