



# Recombinant Human Sonic Hedgehog

20150227BB



**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

<b>Cat.-no.:</b>	<b>100-153S</b>
Size:	5 µg
Lot. No.:	According to product label

## Scientific Background

<b>Gene-ID (NCBI):</b>	6469
<b>Synonyms:</b>	Sonic Hedgehog

Members of the Hedgehog (Hh) family are highly conserved proteins which are widely represented throughout the animal kingdom. The three known mammalian Hh proteins, Sonic (Shh), Desert (Dhh) and Indian (Ihh) are structurally related and share a high degree of amino-acid sequence identity (e.g., Shh and Ihh are 93% identical). The biologically active form of Hh molecules is obtained by autocatalytic cleavage of their precursor proteins and corresponds to approximately the N-terminal one half of the precursor molecule. Although Hh proteins have unique expression patterns and distinct biological roles within their respective regions of secretion, they use the same signaling pathway and can substitute for each other in experimental systems. Recombinant E. coli derived Human Sonic HedgeHog is a 20.0 kDa protein consisting of 176 amino acid residues, including an N-terminal Ile-Val-Ile sequence substituted for the natural occurring chemically modified Cys residue.

## Sequence

```
IVIGPGRGFG KRRHPKLTLP LAYKQFIPNV AEKTLGASGR  
YEGKISRNSR RFKELTPNYN PDIIFKDEEN TGADRLMTQR  
CKDKLNALAI SVMNQWPGVK LRVTEGWDED GHHSEESLHY  
EGRALDITTS DRDRSKYGML ARLAVEAGFD WVYYESKAHI  
HCSVKAENSV AAKSGG
```

## Database References

<b>Protein RefSeq:</b>	NP_000184.1
<b>Uniprot ID:</b>	Q15465
<b>mRNA RefSeq:</b>	NM_000193.2

## Product Specifications

<b>Expressed in</b>	E. coli
<b>Purity</b>	> 98% by SDS-PAGE & HPLC analyses
<b>Endotoxin level</b>	< 0.1 ng /µg of protein (<1EU/µg).
<b>Formulation</b>	lyophilized
<b>Length (aa):</b>	176
<b>MW:</b>	20 kDa

**Biological Activity:** Determined by its ability to induce alkaline phosphatase production by C3H/10T1/2 (CCL-226) cells. The expected ED50 for this effect is 0.8-1.0 µg/ml.



**AVOID REPEATED FREEZE AND THAW CYCLES!**