

## Recombinant Rat Stem Cell Factor (Rat SCF)

### Product Information

Product Name	Cat#	Size
	92268ES10	10 µg
Recombinant Rat Stem Cell Factor (Rat SCF)	92268ES60	100 µg
	92268ES76	500 µg

### Product Description

Stem cell factor (SCF) is a potent hematopoietic growth factor required in regulating both embryonic and adult hematopoiesis. Mature stem cell factor consists of a 189 amino acid (aa) extracellular domain (ECD), a 23 aa transmembrane domain, and a 36 aa cytoplasmic tail. Human SCF protein shares 79% 87% aa sequence identity with dog, cat, mouse, and rat SCF. Rat SCF is active on mouse and human cells, but human SCF is only weakly active on mouse cells. SCF is a primary growth and activation factor for mast cells and eosinophils. Stem cell factor was demonstrated to be the ligand for the c-kit tyrosine kinase receptor. In the mouse, SCF is encoded by Sl (steel), a gene critical to the development of several distinct cell lineages during embryonic life and which has important effects on hematopoiesis in the adult animal.

### Product Properties

<b>Synonyms</b>	FPH2, FPHH, Hematopoietic growth factor KL, MGF, SHEP7, SLF
<b>Accession</b>	P21581
<b>GeneID</b>	60427
<b>Source</b>	E.coli-derived rat SCF protein, Gln26-Ala189, with an N-terminal Met.
<b>Molecular Weight</b>	Approximately 18.5 kDa.
<b>AA Sequence</b>	MQEICRNPVT DNVKDITKLV ANLPNDYMIT LNYVAGMDVL PSHCWLRDMV THLSVSLTLL LDKFSNISEG LSNYSIIDKL GKIVDDLVAE MEENAPKNVK ESLKKPETRN FTPEEFSIF NRSIDAFKDF MVASDTSDCV LSSTLGPEKD SRVSVTKPFM LPPVA
<b>Tag</b>	None
<b>Physical Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Purity</b>	> 95% by SDS-PAGE and HPLC analyses.
<b>Biological Activity</b>	The ED <sub>50</sub> as determined by a cell proliferation assay using murine MC/9-2 mast cells is less than 5 ng/mL, corresponding to a specific activity of > 2.0 × 10 <sup>5</sup> IU/mg. Fully biologically active when compared to standard.
<b>Endotoxin</b>	< 1.0 EU per 1µg of the protein by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH7.4. We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom.
<b>Reconstitution</b>	Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20°C. Further dilutions should be made in appropriate buffered solutions.

### Shipping and Storage

The products are shipped with ice pack and can be stored at -20°C to -80°C for 1 year.

Recommend to aliquot the protein into smaller quantities when first used and avoid repeated freeze-thaw cycles.

### **Cautions**

1. Avoid repeated freeze-thaw cycles.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. For research use only!