

## SCF

### Stem Cell Factor

rat, recombinant, *E. coli*

Cat. No.	Amount
PR-684	10 µg

For *in vitro* use only  
Quality guaranteed for 12 months  
Store at -20°C

### Avoid freeze / thaw cycles

### Form

Lyophilized.  
SCF was lyophilized from 20 mM Tris, pH 7.5.

### Solubility

It is recommended to reconstitute the lyophilized SCF in sterile bidest H<sub>2</sub>O not less than 100 µg/ml. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

### Activity

ED<sub>50</sub>: < 10 ng/ml, corresponding to a specific activity of 10<sup>5</sup> IU/mg, determined by the dosedependent stimulation of the proliferation of human MO7e cells.

### Endotoxin

Less than 0.1 ng/µg (IEU/µg) of SCF.

### Purity

≥ 98% by SDS-PAGE, RP-HPLC, and FPLC.

### Description

Stem Cell Factor (SCF) plays an important role in hematopoiesis and survival, proliferation, and differentiation of mast cells, melanocytes, and germ cells. SCF mediates its biological effects by binding to and activating a receptor tyrosine kinase designated c-kit or SCF receptor (SCFR).

SCF is also known as mast cell growth factor (MCGF), steel (*Sl*) factor (SLF), or kit ligand (KL).

Recombinant human SCF produced in *E. coli* is a single, non-glycosylated polypeptide chain containing 165 amino acids and having a molecular mass of 18.41 kDa.

### Selected References:

- Barreiro et al. (2004) Ghrelin inhibits the proliferative activity of immature Leydig cells in vivo and regulates stem cell factor messenger ribonucleic acid expression in rat testis. *Endocrinology*. **145**:4825.
- Wang et al. (2004) Survivin expression in rat testis is upregulated by stem-cell factor. *Mol. Cell. Endocrinol.* **218**:165.
- Huang et al. (2001) Stem cell factor and insulin-like growth factor-I stimulate luteinizing hormone-independent differentiation of rat ovarian theca cells. *Biol. Reprod.* **64**:451.
- Steinmetz et al. (2000) Effects of growth hormone-releasing hormone-related peptide on stem cell factor expression in cultured rat Sertoli cells. *Endocrine*. **12**:323.
- Yan et al. (2000) Involvement of Bcl-2 family proteins in germ cell apoptosis during testicular development in the rat and pro-survival effect of stem cell factor on germ cells in vitro. *Mol. Cell. Endocrinol.* **165**:115.
- Ferjan H.I. and Carman-Krzan M. (2000) Differential effect of interleukin-3, stem cell factor and nerve growth factor on histamine and serotonin release from rat mast cells. *Inflamm. Res.* **49**:S15.