

# Recombinant Human Stem Cell Factor

Human, Recombinant (KITLG)

Expressed in *E. coli*

Cat. No. CRP0827

Lot. No. (See product label)

## PRODUCT INFORMATION

**Description:** Stem Cell Factor (SCF) is a hematopoietic growth factor that exerts its activity at the early stages of hematopoiesis. SCF stimulates the proliferation of myeloid, erythroid and lymphoid progenitors in bone marrow cultures and has been shown to act synergistically with colony stimulating factors.

**Amino-Acid Sequence:** 165aa (The sequence of the first five N-terminal amino acids was determined and was found to be Met-Glu-Gly-Ile-Cys.), non-glycosylated.

**M. W. :** 18,409 Da

**Recombinant:** Expressed in *E. coli*

**Purity:** >95% as determined by SEC-HPLC and SDS-PAGE .

**Formulation:** rHuSCF was lyophilized from a concentrated (1mg/ml) sterile solution containing 10mM Acetic acid.

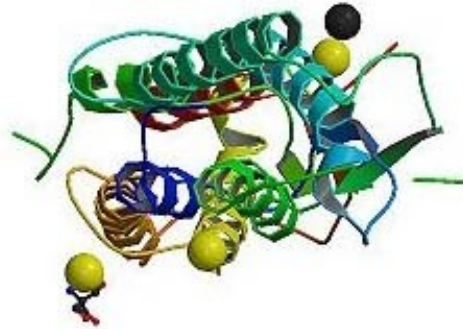
**Specific Activity:** The ED50 as determined by the dose-dependant stimulation of Human TF-1 cells is less than 2 ng/ml, corresponding to a Specific Activity of  $5.0 \times 10^5$  IU/mg.

**Endotoxin:** Less than 0.1 ng/μg (IEU/μg) of rHuSCF.

**Reconstitution:** It is recommended to reconstitute the lyophilized rHuSCF in sterile 18MΩ-cm H<sub>2</sub>O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.

**Storage:** Lyophilized rHuSCF although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rHuSCF should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Aliquot to avoid repeated freeze-thaw cycles.

**FOR RESEARCH USE ONLY**



[PDB](#) rendering based on 1exz.

## GENE INFORMATION

**Gene Name:** [KITLG](#)

**Synonyms:** KL-1; Kitl; MGF; SCF; SF; SHEP7; C-kit ligand; Stem cell factor; Mast cell growth factor; Kit ligand; Kit ligand Precursor; KITLG

**mRNA Refseq:** [NM\\_000899](#)

**Protein Refseq:** [NP\\_000890](#)

**MIM:** [184745](#)

**GeneID:** [4254](#)

**UniProt ID:** P21583

**Chromosome Location:** 12q22

**Pathway:** Cytokine-cytokine receptor interaction; Hematopoietic cell lineage; Melanogenesis

**Function:** growth factor activity; identical protein binding; stem cell factor receptor binding

## REFERENCES

1. Broudy VC. Stem cell factor and hematopoiesis. *Blood*. 1997; 90 (4): 1345–1364
2. Andrews RG, Briddell RA, Appelbaum FR, McNiece IK. Stimulation of hematopoiesis in vivo by stem cell factor. *Curr. Opin. Hematol.* 1999; 1 (3): 187–196
3. Wehrle-Haller B. The role of Kit-ligand in melanocyte development and epidermal homeostasis. *Pigment Cell Res.* 2004; 16 (3): 287–296

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