

## Recombinant Murine Stem Cell Factor (rm SCF)

**Synonyms:** Kit ligand Precursor (Kitl), C-kit ligand, Mast cell growth factor (MGF), Steel Factor (SF)

**Introduction:** Stem cell factor is a cytokine which binds CD117(c-Kit). SCF exists in two forms, cell surface bound SCF and soluble (or free) SCF. Soluble SCF is produced by the cleavage of surface bound SCF by metalloproteases. SCF is a growth factor important for the survival, proliferation, and differentiation of hematopoietic stem cells and other hematopoietic progenitor cells. One of its roles is to change the BFU-E (burst-forming unit-erythroid) cells which are the earliest erythrocyte precursors in the erythrocytic series into the CFU-E (colony-forming unit-erythroid).

**Description:** Recombinant murine SCF produced in *E.Coli* is a single, non-glycosylated polypeptide chain containing 164 amino acids and having a molecular mass of 18.3 kDa. The rm SCF is purified by proprietary chromatographic techniques.

**Source:** *Escherichia Coli*.

**Physical Appearance:** Sterile filtered white lyophilized (freeze-dried) powder.

**Formulation:** Lyophilized from 0.22 µm filtered solution in PBS pH 7.4  
The aliquots of 1µg and 2µg contain Trehalose 5% (w/vol) for better recovery

**Solubility:** It is recommended to reconstitute the lyophilized rm SCF in sterile H<sub>2</sub>O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

**Stability:** Lyophilized rm SCF although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rm SCF 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). Please prevent freeze-thaw cycles.

**Purity:** Greater than 95.0% as determined by SDS-PAGE.

**Endotoxin:** The endotoxin level is less than 1 EU / µg determined by LAL method

**Amino Acid Sequence:** MKEICGNPVT DNVKDITKLV ANLPNDYMIT LNYVAGMDVL PSHCWLRDMV  
IQLSLSLTTL LDKFSNISEG LSNYSIIDKL GKIVDDLVLVLC MEENAPKNIK ESPKRPETRS FTPEEFFSIF  
NRSIDAFKDF MVASDTSDCV LSSTLGPEKD SRVSVTKPFM LPPVA

**Biological Activity:** The ED<sub>50</sub> as determined by the dose-dependant stimulation of human TF-1 cell line is < 10 ng/ml, corresponding to a specific activity of >1 x 10<sup>5</sup> IU/mg.

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<i>small</i>	2 µg	Cat.N°	12343322
<i>medium</i>	10 µg	Cat.N°	12343323
<i>large</i>	50 µg	Cat.N°	12343325
<i>x-large</i>	250 µg	Cat.N°	12343327
<i>xx-large</i>	1000 µg	Cat.N°	12343328

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