

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 H₂O 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 PSHCWL RDMV
IQLSLSLTTL LDKFSNISEG LSNYSIIDKL GKIVDDL VLC MEENAPKNIK ESPKRPETRS FTPEEFFSIF
NRSIDAFKDF MVASDTSDCV LSSTLGPEKD SRVSVTKPFM LPPVA

Biological Activity: The ED₅₀ 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 10⁵ IU/mg.

This material is offered for **research only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

<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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Gladiolenweg 2; 26169 Friesoythe; Germany
phone:+49-(0)4491-400997, fax:+49-(0)4491-400998, info@immunotools.com
www.immunotools.com