

rHuSCF

recombinant Human Stem Cell Factor from *E.coli*

Product	Cat#	Package size
rHuSCF - recombinant Human Stem Cell Factor	C6055.0002	2µg
rHuSCF - recombinant Human Stem Cell Factor	C6055.0010	10µg

Synonyms: Kit ligand Precursor, C-kit ligand, SCF, Mast cell growth factor, MGF, SF, KL-1, Kitl, DKFZp686F2250.

Product description

Stem cell factor / KIT ligand (SCF) is a cytokine which binds CD117(c-Kit). SCF is also known as "steel factor" or "c-kit ligand". 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).

Recombinant human Stem Cell Factor is produced in *E.Coli* as a single, non-glycosylated polypeptide of 165 amino acids and a molecular weight of 18409 Dalton.

Source: *Escherichia coli*

Biological activity

The ED50 as determined by the dose-dependent stimulation of Human TF-1 cells is <2ng/mL, corresponding to a specific activity of 500,000 IU/mg.

Purity: Greater than 98% by SDS-PAGE and HPLC analysis.

Amino acid sequence

The sequence of the first five N-terminal amino acids was determined and was found to be Met-Glu-Gly-Ile-Cys.

Formulation: The protein was lyophilised from a concentrated (1mg/mL) sterile solution containing 0.02% NaHCO₃.

Solubility / Reconstitution

It is recommended to briefly centrifuge the vial prior to opening to bring the contents to the bottom. Reconstitute the lyophilised rHuSCF in sterile water not less than 100µg/mL, which can then be further diluted to other aqueous solutions.

Stability

Lyophilised rHuSCF although stable at room temperature for 3 weeks, should be stored desiccated at -20°C. Reconstituted rHuSCF is best stored refrigerated at +2°C to +8°C between 2-7 days and at -20°C for long term storage. For long term storage it is recommended to add a carrier protein (e.g., 0.1% HSA or BSA).

Please prevent from repeated freeze-thaw cycles.

Protein Content

Protein quantitation was carried out by two independent methods

1. UV spectroscopy at 280 nm using the absorbency value of 0.52 as the extinction coefficient for a 0.1% (1mg/mL) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
2. Analysis by RP-HPLC, using a standard solution of rHuSCF as a Reference Standard.

Usage

This product is for **research/laboratory usage only**. It may not be used as drug, agricultural or pesticidal product, food additive or household chemical.