



Product Datasheet

Product Name	Human SCF
Cata No	CB500018
Source	E.Coli
Synonyms	Kit ligand Precursor, C-kit ligand, SCF, Mast cell growth factor, MGF, SF, KL-1, Kitl, DKFZp686F2250.

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).

Stem Cell Factor Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 165 amino acids and having a molecular mass of 18409 Dalton. The SCF is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Purity

Greater than 98.0% as determined by:

- (a) Analysis by SEC-HPLC.
- (b) Analysis by SDS-PAGE.

Formulation

Lyophilized from a concentrated (1mg/ml) solution in water containing 0.02% NaHCO₃.

Reconstitution

It is recommended to reconstitute the lyophilized Stem Cell Factor in sterile 18MΩ-cm H₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized KIT ligand although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution 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.

Biological Activity

The ED₅₀ as determined by the dose-dependant stimulation of Human TF-1 cells is < 2 ng/ml, corresponding to a Specific Activity of 500,000 IU/mg.

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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.

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