



Stem Cell Factor, mouse recombinant (rmSCF)

Catalog No: 94908
Lot No: XXXXX
Source: *E. coli*
Synonyms: Kit ligand Precursor, C-kit ligand, SCF, Mast cell growth factor, MGF, SF, KL-1, Kitl, DKFZp686F2250, Hematopoietic growth factor KL, Steel factor

Background

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).

Description

Stem Cell Factor mouse recombinant produced in *E. coli* is a single, non-glycosylated polypeptide chain containing 165 amino acids and having a molecular mass of 18309 Dalton. SCF is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

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

Solubility

It is recommended to reconstitute the lyophilized SCF in sterile 18 MΩ-cm H₂O not less than 100 µg/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.

Purity

Greater than 98.0% as determined by (a) Analysis by SEC-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

MKEICGNPVT DNVKDITKLV ANLPNDYMIT LNYVAGMDVL PSHCWLRDMV IQLSLSLTTL LDKFSNISEG LSNYSIIDKL
GKIVDDLVL C MEENAPKNIK ESPKRPETRS FTPEEFFSIF NRSIDAFKDF MVASDTSDCV LSSTLGPEKD SRVSVTKPFM
LPPVA

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.

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