

RayBiotech, Inc.

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Certificate of Analysis and Data Sheet Recombinant Rat Stem Cell Factor

Catalog No.
228-11411

Source:
Escherichia coli

Synonyms:

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

Introduction:

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 Rat Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 164 amino acids (26-189) and having a molecular mass of 18.4 kDa. The Rat SCF is purified by proprietary chromatographic techniques.

Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

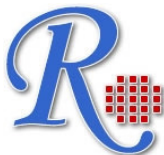
Formulation

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

Solubility

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

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**



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Purity

Greater than 98.0% as determined by

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

Stability:

Lyophilized rat SCF 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.

Amino acid sequence

MQEICRNPVT DNVKDITKLV ANLPNDYMIT LNYVAGMDVL PSHCWLRDMV
THLSVSLTTL LDKFSNISEG LSNYSIIDKL GKIVDDL VAC MEENAPKNVK
ESLKKPETRN FTPEEFSIF NRSIDAFKDF MVASDTSDCV LSSTLGPEKD
SRVSVTKPFM LPPVA .

Biological Activity

The ED50 is determined by the dose-dependant stimulation of the proliferation of human TF-1 cells which is < 10 ng/ml, corresponding to a specific activity of > 1 x 10⁵ units/mg.

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