



Stem Cell Factor (SCF) Mouse, *E. coli* Recombinant Protein

Product Data Sheet

Cat. No.:	A32750002	A32750010	A32751000
Size:	2 µg	10 µg	1 mg

Description:

Our bioactive *Stem Cell Factor (SCF) Mouse, E. coli Recombinant Protein* is a single, non-glycosylated polypeptide chain containing 165 amino acids and has a molecular mass of 18,309 Dalton. The SCF is purified by proprietary chromatographic techniques.

Summary:

Stem cell factor (SCF), also known as KIT ligand, binds to the receptor-type protein-tyrosine kinase KIT (CD117). This pleiotropic cytokine plays an essential role in the regulation of cell survival and proliferation, hematopoiesis, stem cell maintenance, gametogenesis, mast cell development, migration and function, and in melanogenesis. SCF exists in both a soluble and a transmembrane isoform. SCF is commonly used in cell cultures *in vitro* to promote expansion of primitive hematopoietic stem cells and multi-potent progenitor cells.

Other Names:

Murine SCF, Mouse KIT ligand, c-Kit ligand, KITLG, KL, KL-1, KITL, mast cell growth factor, MGF, Steel factor, SF

Source:

E. coli

Purity:

Greater than 98.0% as determined by SEC-HPLC and SDS-PAGE analysis.

Physical Appearance:

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation:

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

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**Reconstitution:**

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

Biological Activity:

The ED₅₀ as determined by the dose-dependent stimulation of Human TF-1 cell line is < 10 ng/ml, corresponding to a specific activity of 1x10⁵ IU/mg.

Amino Acid Sequence:

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

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% (1 mg/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 Stem Cell Factor as a Reference Standard.

Shipping:

At ambient temperature. Upon receipt, store the product at the temperature recommended below.

Stability:

Lyophilized 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.**

Usage:

This product is intended for **Laboratory Research Use Only**. This product may not be used as a pharmaceutical or veterinary drug, agricultural product, or food additive.

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