



User Manual

Stem Cell Factor (SCF) (Human)

Cat. No. HEOPP-1902(1-4)

Description:

C-kit ligand, the recently identified ligand for the kit tyrosine kinase receptor, is mapped to the mouse S1 locus. This pleiotropic cytokine, alternately known as stem cell factor (SCF), mast cell growth factor (MGF) and steel-factor (SLF), plays essential roles in gametogenesis, melanogenesis and early stages of hematopoiesis. In vitro and in vivo, SCF can stimulate the proliferation of mature, as well as the proliferation and maturation of immature, mast cells. On purified primitive human and mouse hematopoietic precursors, SCF acts in a synergistic manner with various growth factors, such as IL-1, IL-3, IL-6, IL-7, and Epo, to induce myeloid, erythroid and lymphoid lineage colony formation. The finding that SCF is also expressed in the nervous system suggests a possible role for SCF in the development of the nervous system.

Source:

Escherichia coli

Unit:

10 µg / 100 µg / 500 µg / 1 mg

Reconstitution:

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at < -20°C. Further dilutions should be made in appropriate buffered solutions.

Formulation:

Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.

Storage:

This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.

Molecular Weight:

Approximately 18.5 kDa, a single non-glycosylated polypeptide chain containing 164 amino acids.

Endotoxin:

Less than 1 EU/μg of SCF as determined by LAL method.

Usage:

This material is offered by Cyagen Biosciences for research, laboratory or further evaluation purposes. FOR RESEARCH USE ONLY. NOT INTENDED FOR ANY ANIMAL OR HUMAN THERAP EUTIC OR DIAGNOSTIC USE.

Biological Activity:

The ED50 determined by a cell proliferation assay using human TF-1 cells is less than 2 ng/mL, corresponding to a specific activity of $> 5.0 \times 10^5$ IU/mg.

Physical Appearance:

Sterile filtered white lyophilized (freeze-dried) powder.

AA Sequence:

EGICRNRVTN NVKDVTKLVA NLPKDYMITL KYVPGMDVLP SHCWISEMVV
QLSDSLTDLL DKFSNISEGL SNYSIIDKLV NIVDDLVECV KENSSKDLKK SFKSPEPRLF

TPEEFFRIFN RSIDAFKDFV VASETSDCVV SSTLSPEKDS RVSVTKPFML PPVA

Purity:

> 97% by SDS-PAGE and HPLC analyses.

Material Safety Data Sheets (MSDSs) are available upon request.

The Certificate of Analysis (COA), which provides detailed quality control information for each product, is also available at the Cyagen website.

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