Datasheet

Cat. No. P1036

SCF, human recombinant protein

Information

Gene ID	4254
Accession #	P21583
Alternate Names	Hematopoietic growth factor KL, MGF, SCF
Source	*Escherichia coli.*
M.Wt	Approximately 18.5 kDa, a single non-glycosylated polypeptide chain containing 164 amino acids.
AA Sequence	EGICRNRVTN NVKDVTKLVA NLPKDYMITL KYVPGMDVLP SHCWISEMVV QLSDSLTDLL DKFSNISEGL SNYSIIDKLV NIVDDLVECV KENSSKDLKK SFKSPEPRLF TPEEFFRIFN RSIDAFKDFV VASETSDCVV SSTLSPEKDS RVSVTKPFML PPVA
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. - 3 years from date of receipt, -20 to -70°C as supplied. - 1 month, 2 to 8°C under sterile conditions after reconstitution. - 3 months, -20 to -70°C under sterile conditions after reconstitution.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.4.
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.
Biological Activity	Fully biologically active when compared to standard. The ED_{50} as determined by a cell proliferation assay using human TF-1 cells is less than 2 ng/ml, corresponding to a specific activity of > 5.0×10^5 IU/mg.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	10 μg	100 μg	500 μg
SCF, human recombinant protein	10 μg	100 μg	500 μg

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

Quality Control

Purity	> 97 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rHuSCF as determined by LAL method.

Description

Stem Cell Factor (SCF) that binds to the c-Kit receptor is produced by fibroblasts and endothelial cells. The soluble and transmembrane forms of the protein are formed by alternative splicing of the same RNA transcript and the presence of both soluble and transmembrane SCF is required for normal hematopoietic function. SCF plays an important role in hematopoiesis, spermatogenesis, and melanogenesis. It also promotes mast cell adhesion, migration, proliferation, and survival. Human SCF shares 79 % - 87 % a.a. sequence identity with canine, feline, mouse, and rat SCF. Furthermore, human SCF is weakly active on mouse cells.

Reference

1. Ronnstrand L. 2004. Cell Mol Life Sci. 61:2535-48.

2. Anderson DM, Williams DE, Tushinski R, et al. 1991. Cell Growth Differ. 2:373-8.

3. Brannan CI, Lyman SD, Williams DE, et al. 1991. Proc Natl Acad Sci U S A. 88:4671-4.

4. Okayama Y, Kawakami T. 2006. Immunol Res. 34:97-115.

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