Recombinant Human Stem Cell Factor

#R00007

Size: 10 μg/100 μg/500 μg

Stability & Storage

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.

Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

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.

AA Sequence

EGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPGMD
VLPSHCWISEMVVQLSDSLTDLLDKFSNISEGLSNYSI
IDKLVNIVDDLVECVKENSSKDLKKSFKSPEPRLFTPE
EFFRIFNRSIDAFKDFVVASETSDCVVSSTLSPEKDSR
VSVTKPFMLPPVA

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.

Product Specification

Synonyms	Hematopoietic growth factor KL, MGF, SCF
Accession	P21583
GeneID	4254
Species	Human
Source	Escherichia coli.
Molecular Weight	Approximately 18.5 kDa, a single non-glycosylated polypeptide chain containing 164 amino acids.
Purity	> 97 % by SDS-PAGE and HPLC analyses.
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.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.4.
Endotoxin	Less than 1 EU/μg of rHuSCF as determined by LAL method.