

Recombinant Rat Stem Cell Factor

#R00314

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) which 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. In addition, it also promotes mast cell adhesion, migration, proliferation, and survival 3. Rat SCF shares 75 % - 90 % a.a. sequence identity with canine, feline, mouse, and human SCF. Furthermore, rat SCF is active on mouse and human cells, but human SCF is only weakly active on mouse cells.

AA Sequence

MQEICRNPVTDNVKDITKLVANLPNDYMITLNYVAGM
DVLPSHCWLRDMVTHLSVSLTTLDDKFSNISEGLSNY

SIIDKLGKIVDDLACMEENAPKNVKESLKKPETRNFT
PEEFFSIFNRSIDAFKDFMVASDTSDCVLSSTLGPEKD
SRVSVTKPFMLPPVA

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
Accession	P21581
GeneID	60427
Species	Rat
Source	Escherichia coli.
Molecular Weight	Approximately 18.5 kDa, a single non-glycosylated polypeptide chain containing 165 amino acids.
Purity	> 95 % 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 murine MC/9-2 mast cells is less than 5 ng/ml, corresponding to a

	specific activity of $> 2.0 \times 10^5$ IU/mg.
Physical	Sterile Filtered White lyophilized
Appearance	(freeze-dried) powder.
Formulation	Lyophilized from a 0.2 μ m filtered concentrated solution in PBS, pH 7.4.
Endotoxin	Less than 1 EU/ μ g of rRtSCF as determined by LAL method.