

Recombinant Human Stem Cell Factor

Cell Culture Tested

Product Code: TC333

Product Description:

Source: *E. coli*

Molecular Weight: 18.4kDa

Synonyms: Stem Cell Factor, c-Kit Ligand, mast Cell

Growth Factor (MGF), Steel Factor

Amino Acid Sequence:

MEGICRNRVT NNVKDVTKLV ANLPKDYMIT LKYVPGMDVL
PSHCWISEMV VQLSDSLTDL LDKFSNISEG LSNYSIIDKL
VNIVDDLVEC VKENSSKDLK KSFKSPEPRL FTPEEFFRIF
NRSIDAFKDF VVASETSDCV VSSTLSPEKD SRVSVTKPFM
LPPVA

Stem cell factor (SCF) is a hematopoietic growth factor that exerts its activity by signaling through the c-Kit receptor. SCF and c-kit are essential for survival, proliferation and differentiation of hematopoietic cells committed to the melanocyte and germ cell lineages. Human SCF manifests low activity on murine cells, while murine and rat SCF are fully active on human cells. Recombinant human SCF is an 18.4kDa polypeptide containing 165 amino acid residues, which corresponds to the sequence of the secreted soluble form of SCF.

Biological Activity: ED₅₀ is determined by the dose-dependent stimulation of the proliferation of human TF-1 cells is $\leq 2.0\text{ng/ml}$, corresponding to a specific activity of $\geq 5 \times 10^5$ units/mg.

Cross Reactivity: Human, Monkey, Rat, Mouse, Leech, Bacteria, Rabbit

TC333 is recombinant human stem cell factor expressed in *E. coli*, filtered through 0.22 μ membrane filter and lyophilized without any additives.

Directions:

Formulation:

Sterile filtered through 0.22 μ filter. Lyophilized with no additives.

Directions for use:

1. Centrifuge the vial prior to opening.
2. Surface sterilize using 70% isopropyl alcohol and take it into laminar air flow cabinet.
3. Aseptically reconstitute the lyophilized powder in sterile tissue culture grade water to a concentration of 0.1 - 1.0mg/ml.
4. For extended storage it is recommended to further dilute in a buffer containing a carrier protein (such as 0.1% BSA) and store the working aliquots at -20°C to -80°C.

Note: Do not vortex.

Note: Refer storage and shelf life section for more details.

Quality Control:

Assay (by SDS-PAGE and HPLC)

NLT 98%

Endotoxin Content

NMT 1EU/ μ g

Cell Culture Test

Passes

Storage and Shelf Life:

Shelf life of Human SCF depends on the storage temperature and the form in which it is stored. Please refer the table overleaf for recommended storage time of different forms of Human SCF at different storage temperatures.

Product form	Temperature	Storage time
Lyophilized	-20°C to - 80°C	See expiry date given on the product label
	4°C	6 months
	RT	1 month
Diluted as per directions	-20°C-80°C	3 months
	2°C - 4°C	1 week

Once reconstituted, aliquot the solution into the smaller volumes and freeze for future use. Repeated freezing and thawing of the reconstituted frozen solution should be avoided to retain potency of the growth factor.

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Disclaimer:

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