

PRODUCT DESCRIPTION

Stem Cell Factor (SCF) is a hematopoietic growth factor that exerts its activity at the early stages of hematopoiesis. SCF has been shown to act synergistically with various growth factors including IL-3, IL-6, G-CSF and erythropoietin to induce proliferation of myeloid and erythroid progenitors. Human SCF is an 18.6 kDa protein containing 165 amino acid residues. For most *in vitro* applications, SCF exerts its biological activity in the concentration range of 0.2 - 20 ng/mL.

SOURCE

A DNA sequence encoding the extracellular domain human SCF (Glu 26 - Ala 189; Accession #134289)¹ was expressed in *E. coli*.

PURITY

Purity is greater than 97%, as determined by SDS-PAGE and visualized by silver stain. Endotoxin level is <1.0 EU per 1 µg cytokine, as determined by the LAL method.

ACTIVITY

The biological activity of recombinant human SCF is measured in a cell proliferation assay using a factor-dependent cell line, TF-1.² The ED₅₀ for this effect is typically 2.5 - 10 ng/mL.

FORMULATION

Recombinant human SCF is lyophilized from a 0.2 µm filtered solution in phosphate buffered saline (PBS) containing 50 µg bovine serum albumin per 1 µg cytokine.

RECONSTITUTION

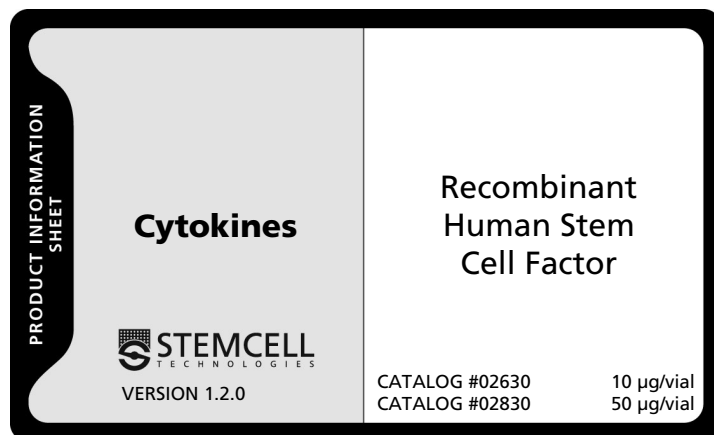
Reconstitute human SCF at a concentration greater than 10 µg/mL with sterile PBS containing at least 0.1% human or bovine serum albumin.

STABILITY AND STORAGE

Lyophilized human SCF is stable for up to twelve months from date of receipt at -20°C to -70°C.

Reconstituted human SCF can be stored under sterile conditions at 2°C - 8°C for one month, or at -20°C to -70°C (in a manual defrost freezer) for three months without detectable loss of activity.

Avoid repeated freezing and thawing.



REFERENCES

1. Martin FH, Suggs SV, Langley KE, Lu HS, Ting J, Okino KH, Morris CF, McNiece IK, Jacobsen FW, Mendlaz EA, *et al.*: Primary structure and functional expression of rat and human stem cell factor DNAs. *Cell* 63: 203-211, 1990
2. Kitamura T, Tange T, Terasawa T, Chiba S, Kuwaki T, Miyagawa K, Piao YF, Miyazono K, Urabe A, Takaku F: Establishment and characterization of a unique human cell line that proliferates dependently on GM-CSF, IL-3, or erythropoietin. *J Cell Physiol* 140: 323-334, 1989