

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, IL-7, G-CSF and erythropoietin to induce proliferation of myeloid, erythroid, and lymphoid progenitors. The 165 amino acid recombinant N-methionyl form of mouse SCF has a molecular mass of approximately 18.6 kDa.

SOURCE

A DNA sequence encoding the 164 amino acid residue mature mouse SCF sequence¹ 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 mouse SCF is measured in a cell proliferation assay using a human factor-dependent cell line, TF-1.² The ED₅₀ for this effect is typically 2.5 - 10 ng/mL.

FORMULATION

Recombinant mouse 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

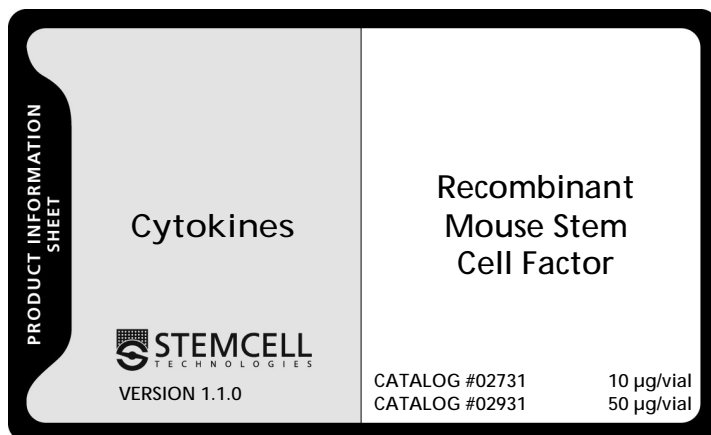
Reconstitute mouse SCF at a concentration greater than 10 µg/mL with sterile PBS containing at least 0.1% human or bovine serum albumin.

STABILITY AND STORAGE

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

Reconstituted mouse 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. Huang E, Nocka K, Beier DR, Chu T-Y, Buck J, Lahm H-W, Wellner D, Leder P, Besmer P: The hematopoietic growth factor KL is encoded by the *S/l* locus and is the ligand of the *c-kit* receptor, the gene product of the *W* locus. *Cell* 63: 225-233, 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