

Product Information

Stem Cell Factor human recombinant, expressed in HEK 293 cells suitable for cell culture

Product Number **H8416**
Storage Temperature $-20\text{ }^{\circ}\text{C}$

Synonyms: SCF, c-Kit Ligand (KL), Mast Cell Growth Factor (MGF)

Product Description

Recombinant human Stem Cell Factor (SCF) is expressed in human HEK 293 cells with a calculated molecular mass of 35-45 kDa. This protein is manufactured in human cells, with no serum. The human cells expression system allows human-like glycosylation and folding, and often supports higher specific activity of the protein. The protein is produced with no artificial tags and no carrier proteins.

Stem Cell Factor is a peptide growth factor/cytokine with broad activities, especially related to hematopoiesis.^{1,3} Among the many activities of SCF are the ability to act on early hematopoietic progenitor/stem cells, and to stimulate the proliferation and survival of mast cells. Also, SCF is one of the most potent stimulators of multi-lineage progenitors (CFUGEMM) in both human and murine bone marrow cells.^{2,4} SCF acts synergistically with other growth factors, including erythropoietin, G-CSF, M-CSF, GM-CSF, IL-3, and IL-6, to increase the number and size of colonies of hematopoietic progenitors.^{1,2,5} SCF appears to play an important role in the survival, proliferation, or migration of primordial germ cells and melanoblasts during both development^{6,7} and maturation.^{8,9}

This product is lyophilized from a solution containing phosphate buffered saline (PBS), pH 7.4, with no carrier proteins. It is aseptically filled.

The biological activity of recombinant human SCF was tested in culture by measuring its ability to stimulate proliferation of the human TF-1 cells (human erythroleukemic indicator cell line).

EC_{50} : $\leq 200.0\text{ ng/mL}$

The EC_{50} is defined as the effective concentration of SCF that elicits a 50% increase in cell growth in a cell-based bioassay.

Purity: $\geq 95.0\%$ (SDS-PAGE)

Endotoxin: $\leq 1.00\text{ EU}/\mu\text{g}$ SCF (LAL)

Uniprot: P21583

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Briefly centrifuge the vial before opening. Reconstitute in water to a concentration of 0.1 mg/mL. Do not vortex. This solution can be stored at $2-8\text{ }^{\circ}\text{C}$ for up to 1 week. For extended storage, it is recommended to store in working aliquots at $-20\text{ }^{\circ}\text{C}$.

Storage/Stability

Store the lyophilized product at $-20\text{ }^{\circ}\text{C}$. The product is stable for at least 2 years as supplied.

References

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7. Silvers, W., Coat Colors of Mice: A Model for Gene Action and Interaction, Springer-Verlag (New York, NY: 1979) p. 206.
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