

Animal-Free | Endotoxin-Free | Carrier-Free

SCF, human, recombinant

Catalog Number: IK2500

DESCRIPTION

Stem cell factor (SCF, c-kit ligand) is a hematopoietic growth factor acting at the early stages of hematopoiesis. SCF promotes the survival, proliferation and differentiation of both myeloid and lymphoid hematopoietic progenitors in bone marrow culture. It also stimulates the growth and activation of mast cells and eosinophils. SCF has been shown to act synergistically with other growth factors, such as GM-CSF, G-CSF, IL-7 and EPO. Human SCF show low activity on mouse cells, while murine SCF are fully active on human cells.

SOURCE

Produced in the endosperm tissue of barley grain (*Hordeum vulgare*). ISOkine® growth factors and cytokines are animal-free and serum-free and void of antibiotics, endotoxins, viruses, and prions.

FORMULATION

2xPBS pH 7.2, sterile filtered through 0.22 µm filter.

PURITY

> 95% by SDS-PAGE gel analysis.

SHELF LIFE

The lyophilized protein has a shelf life for 3 years when stored at < 20°C.

RECONSTITUTION

Always centrifuge the vial before opening. It is recommended to reconstitute the lyophilized protein in sterile buffered saline to a concentration of no less than 100 µg/ml. For long term storage of the reconstituted solution, it is recommended to add a carrier protein (0.1% HSA or BSA).

STABILITY

The lyophilized protein, though stable at room temperature for a few weeks, is best stored at -20°C. Reconstituted protein should be used immediately or stored in working aliquots at -20°C. Avoid repeated freeze-thaw cycles.

BIOLOGICAL ACTIVITY

Each batch of ISOkine® growth factors is tested for bioactivity and verified to have comparable activity to a commercial source. The bioactivity of ISOkine® recombinant human SCF is assayed by measuring its dose-dependent effect on the proliferation of TF-1 cells. The ED50 for this effect using SCF is typically <2-10 ng/ml. Optimal concentration should be determined for specific applications and cell lines.

ENDOTOXIN LEVEL

Endotoxin level is < 0.0100 EU per µg of ISOkine® product by LAL method.

MAT ASSAY

Purified ISOkine® product carries no pyrogenic or pro-inflammatory contaminants, as assayed with monocyte activation test using Human 10-plex Cytokine Assay measuring IL-6, TNF-alpha and IL-1beta induction. (Ref. The Blood Bank, University Hospital of Iceland, Reykjavik, Iceland.)

MOLECULAR WEIGHT

Recombinant human SCF contains 164 amino acids and an N-terminal 6 amino acid histidine tag for a total length of 170 amino acids and has a predicted molecular mass of 19.3 kDa.

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