

Recombinant mouse stem cell factor (SCF). Animal and Endotoxin free

CATALOGUE NUMBER: AMS-931 AVAILABLE SIZES: 10µg, 50µg, 100µg, 1000µg

DESCRIPTION

Stem Cell Factor (SCF, also known as c-kit ligand, mast cell growth factor and steel factor) 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 shows low activity on murine cells, while murine and rat SCF are fully active on human cells.

SOURCE

Recombinant mouse SCF is produced in the endosperm tissue of barley grain (*Hordeum vulgare*), that exhibits up to 50 times less protease activity than *E.coli* or mammalian cells. Barley seed is void of any human or animal viral contaminants that could jeopardize your cell culture.

FORMULATION

Sterile filtered through a 0.2 µm filter. Lyophilized from PBS, pH 7.2

PURITY

Greater than 95% by SDS-PAGE gel analysis

RECONSTITUTION

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

STABILITY

The lyophilized protein, though stable at room temperature for 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 growth factor is tested for bioactivity and verified to have comparable activity to a commercial source. Bioactivity of mouse SCF is measured by its dose-dependent effect on the proliferation of TF-1 cells. The ED50 for this effect is typically < 12 ng/ml corresponding to specific activity > 8 x 10⁴ U/mg. We recommend that the optimal concentration for each specific application be determined by an initial dose-response assay.

ENDOTOXIN LEVEL

Endotoxin level is less than 0.005ng per µg of ISOkine™ product (0.05EU/µg).

MAT assay

Purified 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. The Blood Bank, University Hospital of Iceland, Reykjavik, Iceland

MOLECULAR WEIGHT

Recombinant mouse SCF contains 166 amino acids and a 16 a.a. histidine-based tag for a total length of 182 a.a. and has a predicted molecular mass of 20.6 kDa including his-tag. As a result of glycosylation, the recombinant protein migrates with an apparent molecular mass of 24 kDa in SDS-PAGE.

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