

Active Recombinant Human KITLG, His-tagged

Cat. No. KITLG-33H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human SCF was produced in the endosperm tissue of barley grain (<i>Hordeum vulgare</i>).
Species	Human
Source	Barley Grain
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.
Form	Sterile filtered through a 0.2 µm filter. Lyophilized from PBS, pH 7.2
Bio-activity	Recombinant human SCF is measured by its dose-dependent effect on the proliferation of TF-1 cells. The ED50 for this effect is typically between 2 - 10 ng/ml corresponding to specific activity of 1 – 5 x 10 ⁵ U/mg. We recommend that the optimal concentration for each specific application be determined by an initial dose-response assay.
Molecular Mass	Recombinant human SCF contains 165 amino acids and a 16 a.a. histidine-based tag

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for a total length of 181 a.a. and has a predicted molecular mass of 20.7 kDa including his-tag. As a result of glycosylation, the recombinant protein migrates with an apparent molecular mass of 22-24 kDa in SDS-PAGE.

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

Purity Greater than 95% by SDS-PAGE gel analysis

Storage 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.

Reconstitution 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).

GENE INFORMATION

Gene Name KITLG KIT ligand [Homo sapiens]

Official Symbol KITLG

Synonyms KITLG; KIT ligand; MGF; kit ligand; familial progressive hyperpigmentation 2; FPH2; Kitl; KL 1; mast cell growth factor; SCF; SF; steel factor; stem cell factor; c-Kit ligand; KL-1; SHEP7; kit-ligand; DKFZp686F2250;

Gene ID 4254

mRNA Refseq NM_000899

Protein Refseq NP_000890

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MIM	184745
UniProt ID	P21583
Chromosome Location	12q22
Pathway	C-MYB transcription factor network, organism-specific biosystem; Cytokine-cytokine receptor interaction, organism-specific biosystem; Cytokine-cytokine receptor interaction, conserved biosystem; Hematopoietic cell lineage, organism-specific biosystem; Hematopoietic cell lineage, conserved biosystem; Kit Receptor Signaling Pathway, organism-specific biosystem; Melanogenesis, organism-specific biosystem;
Function	cytokine activity; growth factor activity; protein binding; stem cell factor receptor binding;

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