

Recombinant Human KIT Ligand, His-tagged

Cat. No. KITLG-60H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Stem Cell Factor produced in insect cells is a single, glycosylated polypeptide chain containing 165 amino acids and having a molecular mass of 18409 Dalton. The SCF is fused to a C-terminal His-tag and purified by proprietary chromatographic techniques.
Species	Human
Source	Insect Cells
Description	Stem cell factor / KIT ligand (SCF) is a cytokine which binds CD117 (c-Kit). SCF is also known as "steel factor" or "c-kit ligand". SCF exists in two forms, cell surface bound SCF and soluble (or free) SCF. Soluble SCF is produced by the cleavage of surface bound SCF by metalloproteases. SCF is a growth factor important for the survival, proliferation, and differentiation of hematopoietic stem cells and other hematopoietic progenitor cells. One of its roles is to change the BFU-E (burst-forming unit-erythroid) cells, which are the earliest erythrocyte precursors in the erythrocytic series, into the CFU-E (colony-forming unit-erythroid).
Amino Acid Sequence	The sequence of the first five N-terminal amino acids was determined and was found to be Ser-Leu-Gly-Ser-Leu.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	Greater than 95.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

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Formulation	The protein is supplied in 1X PBS, pH 7.4.
Solubility	It is recommended to reconstitute the lyophilized Stem Cell Factor in sterile 18MΩ-cm H ₂ O not less than 100g/ml, which can then be further diluted to other aqueous solutions.
Biological Activity	The ED ₅₀ as determined by the dose-dependant stimulation of Human TF-1 cells is typically 2-5 ng/ml.
Protein Content	Protein quantitation was carried out by two independent methods: 1. UV spectroscopy at 280 nm using the absorbency value of 0.52 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics). 2. Analysis by RP-HPLC, using a standard solution of Stem Cell Factor as a Reference Standard.
Storage	Lyophilized KIT ligand although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution SCF should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

GENE INFORMATION

Gene Name	KITLG KIT ligand [Homo sapiens]
Synonyms	KITLG; KIT ligand; SF; MGF; SCF; FPH2; KL-1; Kitl; SHEP7; DKFZp686F2250; KITLG; C-kit ligand; Stem cell factor; Mast cell growth factor; steel factor
Gene ID	4254

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mRNA Refseq	NM_000899
Protein Refseq	NP_000890
UniProt ID	P21583
Chromosome Location	12q22
MIM	184745
Pathway	Cytokine-cytokine receptor interaction; Hematopoietic cell lineage; Melanogenesis; Pathways in cancer
Function	growth factor activity; identical protein binding; stem cell factor receptor binding
PDB rendering based on 1exz.	