

Recombinant Rat Kit Ligand

Cat. No. Kitlg-62R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Rat Stem cell factor produced in <i>E. Coli</i> is a single, non-glycosylated polypeptide chain containing 165 amino acids and having a molecular mass of 18409 Dalton. The SCF is purified by proprietary chromatographic techniques.
Species	Rat
Source	E.coli
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 Met-Gln-Glu-Ile-Cys.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	Greater than 98.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

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Formulation	Lyophilized from a concentrated (1mg/ml) solution in water containing 20mM Tris pH-7.5.
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 is determined by the dose-dependant stimulation of the proliferation of human MO7e cells which is < 10 ng/ml, corresponding to a specific activity of > 1 x 10 ⁵ units/mg.
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 [<i>Rattus norvegicus</i>]
Synonyms	Kitlg; KIT ligand; Mgf; SCF; Kitl; Kitlg; FPH2; KL-1; SHEP7; DKFZp686F2250; KITLG; C-kit ligand; Stem cell factor; Mast cell growth factor; steel factor
Gene ID	60427
mRNA Refseq	NM_021843
Protein Refseq	NP_068615

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UniProt ID	P21581
Chromosome Location	7q13
Pathway	Cytokine-cytokine receptor interaction; Hematopoietic cell lineage; Melanogenesis; Pathways in cancer
Function	cytokine activity; identical protein binding; protein binding; stem cell factor receptor binding
PDB rendering based on 1exz.	