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Recombinant Rat c-Kit ligand/KITLG/SCF Protein

Catalog No.: RP01794

Basic Information

Catalog No.
RP01794

Category
Cell Line

Parental Cell line
19.17 kDa

Genotype
Recombinant Rat c-Kit ligand/KITLG/SCF Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Gln26-Ala189) of rat c-Kit ligand/SCF/KITLG (Accession #NP_068615.1) fused with 6×His tag at the C-terminus.

Gene Information

Gene Symbol
SCF

Species
HEK293 cells

Gene ID
60427

Swiss Prot
P21581-1

Synonyms
Mgf; SCF; Kitl;c-Kit ligand

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Background

Similar to Kit ligand precursor (C-kit ligand), also known as Stem cell factor (SCF), Mast cell growth factor (MGF), or Hematopoietic growth factor KL. SCF/C-kit ligand is the ligand of the tyrosine-kinase receptor encoded by the KIT locus. This ligand is a pleiotropic factor that acts in utero in germ cell and neural cell development, and hematopoiesis, all believed to reflect a role in cell migration. In adults, it functions pleiotropically, while mostly noted for its continued requirement in hematopoiesis. SCF/C-kit ligand stimulates the proliferation of mast cells. This protein can augment the proliferation of both myeloid and lymphoid hematopoietic progenitors in bone marrow culture. It may act synergistically with other cytokines, probably interleukins SCF/C-kit ligand is the ligand for the tyrosine kinase receptor c-kit, which is expressed on both primitive and mature hematopoietic progenitor cells. In vitro, SCF/C-kit ligand synergizes with other growth factors, such as granulocyte colony-stimulating factor (G-CSF), granulocyte-macrophage colony-stimulating factor, and interleukin-3 to stimulate the proliferation and differentiation of cells of the lymphoid, myeloid, erythroid, and megakaryocytic lineages. In vivo, SCF/C-kit also synergizes with other growth factors and has been shown to enhance the mobilization of peripheral blood progenitor cells in combination with G-CSF. In phase I/II clinical studies administration of the combination of SCF and G-CSF resulted in a two- to threefold increase in cells that express the CD34 antigen compared with G-CSF alone.

Product Information

Description
Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.
Mammalian cells such as human, rat and mouse cells are normally diploid with two alleles. Homozygote: both alleles were knocked out, mRNA has no signal, no expression of proteins. Heterozygote: only one allele was knocked out, the mRNA transcript levels was decreased compared to wild type, and the protein expression levels was also lower than that of the wild type.

Packaging
Gln26-Ala189

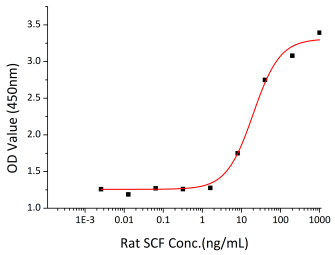
Shipping Conditions
Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Amount

Storage
Store at -20℃

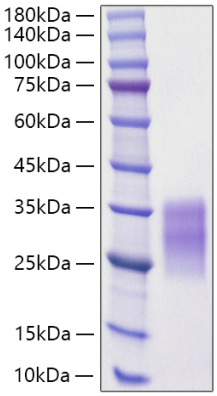
Protocol

Sequencing data



Recombinant Rat c-Kit ligand/SCF/KITLG stimulates cell proliferation of the MC/9-2 mouse mast cells.The ED50 for this effect is 9.95-39.78 ng/mL, corresponding to a specific activity of 2.51×10^{4}~ 1.01×10^{5} units/mg.

Sequencing data



Recombinant Rat c-Kit ligand/KITLG/SCF Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.