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Recombinant Rat c-Kit ligand/KITLG/SCF Protein

Catalog No.: RP01794 Recombinant

Sequence Information

Species	Gene ID	Swiss Prot
Rat	60427	P21581-1

Tags
C-His

Synonyms
Mgf; SCF; Kitl;c-Kit ligand

Product Information

Source	Purification
HEK293 cells	≥ 95 % as determined by SDS-PAGE.

Calculated MW	Observed MW
19.17 kDa	25-40 kDa

Endotoxin
< 0.01 EU/μg of the protein by LAL method

Formulation
Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

Reconstitution
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.

Contact

400-999-6126

cn.market@abclonal.com.cn

www.abclonal.com.cn

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.

Basic Information

Description
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.

Bio-Activity
Measured in a cell proliferation assay using 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.

Shipping
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Storage
Store at -20℃.Store the lyophilized protein at -20℃ to -80 ℃ up to 1 year from the date of receipt.
After reconstitution, the protein solution is stable at -20℃ for 3 months, at 2-8℃ for up to 1 week.
Avoid repeated freeze/thaw cycles.

Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

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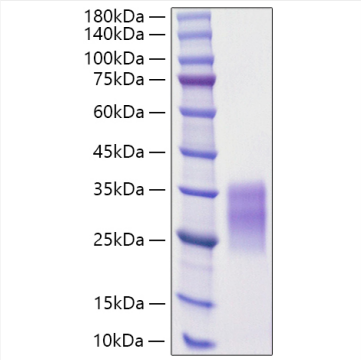
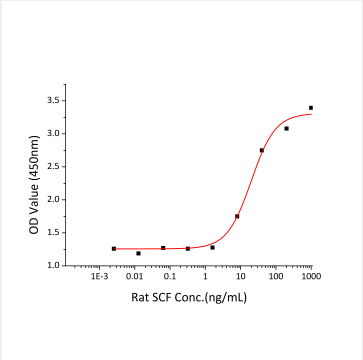
Validation Data



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



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.