

Mouse SCF / C-kit ligand Protein (ECD, His Tag)

Catalog Number: 50487-M08B



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

Clo; Con; Gb; Kitlg; Mgf; SCF; SF; Sl; SLF

Protein Construction:

A DNA sequence encoding the amino acids (Met 1-Ala 189) of mouse KITL (P20826-1) was fused with a polyhistidine tag at the C-terminus.

Source: Mouse

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

1. Measured by its binding ability in a functional ELISA. Immobilized mouse KITL at 2 µg/ml (100 µl/well) can bind mouse CD117 with a linear range of 1.28-32 ng/ml.
2. Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The ED₅₀ for this effect is typically 5-30 ng/mL.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Predicted N terminal: Lys 26

Molecular Mass:

The secreted recombinant mouse KITL consists of 175 amino acids and has a calculated molecular mass of 19.7 kDa. The recombinant protein migrates as an approximately 23 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20mM Tris, 50mM NaCl, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Stability & Storage:

Samples are stable for twelve months from date of receipt at -20°C to -80°C.

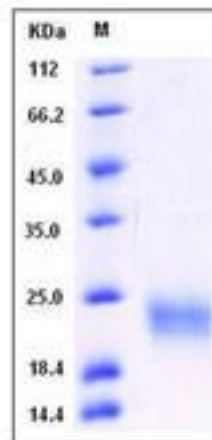
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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.

References

1. McNiece IK, et al. (1995) Stem cell factor. J Leukoc Biol. 58(1): 14-22.
2. Besmer P, et al. (1993) The kit-ligand (steel factor) and its receptor c-kit/W: pleiotropic roles in gametogenesis and melanogenesis. Dev Suppl. 1993:125-37.
3. Mekori YA, et al. (1993) IL-3-dependent murine mast cells undergo apoptosis on removal of IL-3. Prevention of apoptosis by c-kit ligand. J Immunol. 151(7): 3775-84.

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