

Human SCF / C-kit ligand Protein (aa 1-189, His Tag)

Catalog Number: 10451-H08B



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

KITLG, DKFZp686F2250, FPH2, KL-1, Kitl, MGF, SCF, SF, SHEP7

Protein Construction:

A DNA sequence encoding the amino acid (Met 1-Ala 189) of human SCF (P21583-1) extracellular domain was expressed, with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 92 % as determined by SDS-PAGE

Bio-Activity

Measured in a cell proliferation assay using TF1 human erythroleukemic cells (Kitamura, T. et al. 1989, J. CellPhysiol. 140: 323.).

The ED 50 for this effect is typically 0.5-3 ng/ml.

Endotoxin:

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

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Glu 26

Molecular Mass:

The secreted recombinant human SCF (aa 1-189) consists of 175 amino acids and predicts a molecular mass of 19.9 kDa. The apparent molecular mass of rh SCF is approximately 22 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 8.0

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

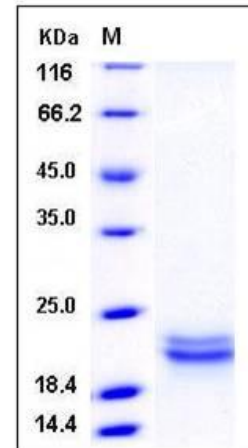
Usage Guide

Storage:

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.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Kit ligand, also known as Hematopoietic growth factor KL, Mast cell growth factor, Steel factor, Stem cell factor, c-Kit ligand, Kitlg and KITL, is a single-pass type I membrane protein which belongs to the SCF family. KITL / kit ligand also belongs to the family of dimeric transmembrane growth factors. The soluble form of KIT ligand is a secreted protein. Mast cells are thought to participate in a variety of immune responses, such as parasite resistance and the allergic reaction. Mast cell development depends on stem cell factor (Kit ligand) and its receptor, c-Kit. KITL / kit ligand stimulates the proliferation of mast cells. KITL / kit ligand is able to augment the proliferation of both myeloid and lymphoid hematopoietic progenitors in bone marrow culture. Efficient cell surface presentation of KITL / kit ligand is essential for the migration, proliferation, and survival of melanocytes, germ cells, hemopoietic stem cells, and mastocytes. KITL / kit ligand acts synergistically with other cytokines, probably interleukins. KITL / kit ligand plays a crucial role in the development and maintenance of the melanocyte lineage in adult skin. It exerts permanent survival, proliferation and migration functions in Kit receptor-expressing melanocytes. KITL / kit ligand misexpression in some hyperpigmented lesions may open the avenue for Kitl-dependent treatment of pathological skin conditions.

References

1. Nishida, K. et al., 2002, Blood. 99 (5): 1866-9.
2. Paulhe, F. et al., 2004, J Biol Chem. 279 (53): 55545-55.
3. Fernandez, S.M. et al., 2008, Biol Reprod. 79 (2): 318-27.
4. Wehrle-Haller, B. et al., 2003, Pigment Cell Res. 16 (3): 287-96.

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