

Recombinant Rat SCF Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52309

Size: 10ug, 100ug

Protein Name: Kit ligand (Hematopoietic growth factor KL) (Mast cell growth factor) (MGF) (Stem cell factor) (SCF) (c-Kit ligand) [Cleaved into: Soluble KIT ligand (sKITLG)]

Synonym: Kitlg, Kitl, Mgf

UniProt ID: P21581

UniProt Link: www.uniprot.org/uniprotkb/P21581/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 273 AA

Molecular Weight: 31 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MKKTQTWIITCIYLQLLLFNPLVKTQEICRNPVTDNVKDITKLVANLPNDYMITLNYVAGMDVLP SHCW
LRDMVTHLSVSLTTLDDKFSNISEGLSNYSIIDKLGKIVDDL VACMEENAPKNVKESLKKPETRNFTPE
EFFSIFNRSIDAFKDFMVASDTSDCVLSSTLGPEKDSRVSVTKPFMLPPVAASSLRNDSSSSNRKAA
KSPEDPGLQWTAMALPALISLVIGFAFGALYWKKKQSSLTRAVENIQINEEDNEISMLQQKEREFEV

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Kit ligand (Hematopoietic growth factor KL) (Mast cell growth factor) (MGF) (Stem cell factor) (SCF) (c-Kit ligand) [Cleaved into: Soluble KIT ligand (sKITLG)] produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Ligand for the receptor-type protein-tyrosine kinase KIT. Plays an essential role in the regulation of cell survival and proliferation, hematopoiesis, stem cell maintenance, gametogenesis, mast cell development, migration and function, and in melanogenesis. KITLG/SCF binding can activate several signaling pathways. Promotes phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase, and subsequent activation of the kinase AKT1. KITLG/SCF and KIT also transmit signals via GRB2 and activation of RAS, RAF1 and the MAP kinases MAPK1/ERK2 and/or MAPK3/ERK1. KITLG/SCF and KIT promote activation of STAT family members STAT1, STAT3 and STAT5. KITLG/SCF and KIT promote activation of PLCG1, leading to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate. KITLG/SCF acts synergistically with other cytokines, probably interleukins.

Subcellular Localization: [Isoform 1]: Cell membrane ; Single-pass type I membrane protein .; [Isoform 2]: Cytoplasm . Cytoplasm, cytoskeleton . Cell membrane ; Single-pass type I membrane protein . Cell projection, lamellipodium . Cell projection, filopodium .; [Soluble KIT ligand]: Secreted .

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.