Datasheet for ABIN1589594

KIT Ligand Protein (KITLG) (His tag)

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Overview

Quantity:	2 µg
Target:	KIT Ligand (KITLG)
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This KIT Ligand protein is labelled with His tag.

Product Details

Purpose:	SCF
Sequence:	EGICRNRVTN NVKDVTKLVA NLPKDYMITL KYVPGMDVLP SHCWISEMVV QLSDSLTDLL DKFSNISEGL SNYSIIDKLV NIVDDLVECV KENSSKDLKK SFKSPEPRLF TPEEFFRIFN RSIDAFKDFV VASETSDCVV SSTLSPEKDS RVSVTKPFML PPVAASRHHH HHH
Specificity:	Chromosomal location:12q22
Characteristics:	Length (aa):173
Purity:	> 98 % by SDS-PAGE

Target Details

Target:	KIT Ligand (KITLG)
Alternative Name:	SCF (KITLG Products)

Target Details

Background:	Stem Cell Factor (SCF), a 18,4 kDa protein consisting of 164 amino acid residues (Asp26-Ala189) and fused to a C-terminal His-tag (6x His), is a hematopoietic growth factor that exerts its activity at the early stages of hematopoiesis. SCF stimulates the proliferation of myeloid, erythroid, and lymphoid progenitors in bone marrow cultures and has been shown to act synergistically with colony stimulating factors. This pleiotropic cytokine, alternately known as mast cell growth factor (MGF) and steel-factor (SLF), plays essential roles in gametogenesis, melanogenesis and early stages of hematopoiesis. In vitro and in vivo, SCF can stimulate the proliferation of mature, as well as the proliferation and maturation of immature, mast cells. On purified primitive human and mouse hematopoietic precursors, SCF acts in a synergistic manner with various growth factors, such as IL-1, IL-3, IL-6, IL-7, and Epo, to induce myeloid, erythroid and lymphoid lineage colony formation. The finding that SCF is also expressed in the nervous system suggests a possible role for SCF in the development of the nervous system. The cDNA sequences for human, mouse and rat SCF encode transmembrane proteins which are composed of a signal peptide, a 189 amino acid extracellular domain, a hydrophobic transmembrane domain and an intracellular domain. Native SCF can exist either as the membrane bound form or as a soluble form consisting of the first 164 or 165 amino acids of the extracellular domain. The soluble form is believed to be a proteolytic cleavage product of the transmembrane protein. Both the soluble and the transmembrane form of SCF have growth factor activities. Native soluble SCF is a heavily N- and O-glycosylated protein which exists as a non-covalently associated dimer in solution. All four cysteine residues of SCF monomers are involved in intramolecular disulfide bonds. Murine or rat soluble SCF is highly homologous to human soluble SCF (approximately 80 %). Whereas both rat and mouse SCF are active on human cells, the human protein is much less active on mouse or rat cells. Synonyms: KITLG, SF, MGF, SCF, FPH2, KL-1, Kitl, SHEP7, kit-ligand
Molecular Weight:	20.0 - 23.0 kDa
Gene ID:	4254
NCBI Accession:	NM_000899, NP_000890
UniProt:	P21583
Pathways:	RTK Signaling, Fc-epsilon Receptor Signaling Pathway, EGFR Signaling Pathway, Neurotrophin Signaling Pathway

Application Details

Application Notes:	Measured in a cell proliferation assay using TF 1 human erythroleukemic cells [Kitamura T et al,

Application Details

	J Cell Physiol, 1989]. The ED50 for this effect is typically 1-5 ng/mL. .
Comment:	Cytokines & Growth Factors
Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Centrifuge vial prior to opening. Human SCF should be reconstituted in water to a concentration of 0.1 mg/mL. This solution can be diluted in water or other buffer solutions or stored at -20 °C.
Buffer:	PBS
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	RT,0 °C,-20 °C
Storage Comment:	The lyophilized human SCF, though stable at room temperature, is best stored desiccated below 0°C. Reconstituted human SCF should be stored in working aliquots at -20°C. Avoid repeated freeze-thaw cycles