Datasheet for ABIN1589635

# KIT Ligand Protein (KITLG)

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## Overview

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| Quantity: | 2 µg |
| Target: | KIT Ligand (KITLG) |
| Origin: | Human |
| Source: | Escherichia coli (E. coli) |
| Protein Type: | Recombinant |
| Biological Activity: | Active |

## Product Details

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| Purpose: | SCF |
| Sequence: | MEGICRNRVT NNVKDVTKLV ANLPKDYMIT LKYVPGMDVL PSHCWISEMV VQLSDSLTDL LDKFSNISEG LSNYSIIDKL VNIVDDLVEC VKENSSKDLK KSFKSPEPRL FTPEEFFRIF NRSIDAFKDF VVASETSDCV VSSTLSPEKD SRVSVTKPFM LPPVA |
| Specificity: | Chromosomal location:12q22 |
| Characteristics: | Length (aa):165 |
| Purity: | > 98 % by SDS-PAGE |
| Endotoxin Level: | < 0.1 ng per µg of human SCF |

## Target Details

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

## Target Details

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| Background: | Stem cell factor (SCF), also known as c-kit ligand (KL), mast cell growth factor (MGF), and steel factor (SLF), is a widely expressed 28-40 kDa type I transmembrane glycoprotein. It promotes the survival, differentiation, and mobilization of multiple cell types including myeloid, erythroid, megakaryocytic, lymphoid, germ cell, and melanocyte progenitors. SCF is a primary growth and activation factor for mast cells and eosinophils. Mature mouse SCF consists of a 189 amino acids (aa) extracellular domain (ECD), a 23 aa transmembrane segment, and a 36 aa cytoplasmic tail. The ECD shows both N-linked and O-linked glycosylation. Proteolytic cleavage at two alternate sites in the extracellular juxtamembrane region releases a 25 kDa soluble molecule which is comparable to the only form produced by Steel-dickie mutant mice. An alternatively spliced isoform of mouse SCF lacks 28 aa that encompasses the primary proteolytic recognition site. Within the ECD of the short isoform (corresponding to this recombinant protein), mouse SCF shares 93% aa sequence identity with rat SCF and 72 % to 75 % with canine, feline, and human SCF. Rat SCF is active on mouse and human cells, but human SCF is only weakly active on mouse cells. Non-covalent dimers of transmembrane or soluble SCF interact with the receptor tyrosine kinase SCF R/c-kit to trigger receptor dimerization and signaling. SCF assists in the recovery of cardiac function following myocardial infarction by increasing the number of cardiomyocytes and vascular channels.<br>Synonyms: KITLG, SF, MGF, SCF, FPH2, KL-1, Kitl, SHEP7, kit-ligand, stem cell factor, Mast cell growth factor, c-Kit ligand |
| Molecular Weight: | 18.5 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

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| Application Notes: | The ED50 as determined by the dose-dependent stimulation of human TF-1 cells is in the range of 1 - 5 ng/mL. The WHO standard #91/682 was used as a control. |
| Comment: | Cytokines & Growth Factors |
| Restrictions: | For Research Use only |

## Handling

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| 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 further diluted in water or other buffer solutions or stored at -20 °C. |
| Buffer: | PBS |
| Storage: | RT,4 °C,-20 °C |
| Storage Comment: | Lyophilized SCF although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution SCF should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). |