

Human SCF, cct-premium (HSA)

Synonyms: KITLG, SF, MGF, SCF, FPH2, KL-1, Kitl, SHEP7, kit-ligand, stem cell factor, Mast cell growth factor, c-Kit ligand

PLEASE NOTE: ALWAYS CENTRIFUGE VIAL BEFORE OPENING

Size	Order #	Lot #	Expiry Date
10 µg	1884.951.010		
50 µg	1884.951.050		
100 µg	1884.951.100		

Please enquire for bulk quantities and other vial sizes

Description

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.

- **Source** *E. Coli*
- **Purity** ≥ 98 % (SDS-PAGE, silver stained)
- **Endotoxin level** ≤ 0.01ng/µg (≤ 0.1EU/µg)

Biological Activity

The ED₅₀ as determined by the dose-dependent stimulation of human TF-1 cells is < 2ng/ml, corresponding to a specific activity of 5x10⁵ IU/mg.

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.

Amino Acid Sequence

MEGICRNRVT NNVKDVTKLV ANLPKDYMIT LKYVPGMDVL PSHCWISEMV VQLSDSLTDL LDKFSNISEG
 LSNYSIIDKL VNIVDDLVEC VKENSSKDLK KSFKSPEPRL FTPEEFFRIF NRSIDAFKDF VVASETSDCV
 VSSTLSPEKD SRVSVTKPFM LPPVA

Usage: For research use only. Not for use in diagnostic or therapeutic procedures. Not for human use.

*The Buffer may vary depending on the Lot #. Please contact our technical support if you have specific requirements.

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