

Recombinant Human SCF

Catalog No: C034

Description	Recombinant Human Stem Cell Factor is produced by our E.coli expression system and the target gene encoding Glu26-Ala189 is expressed.		
Source	E. coli		
Alternative name	Kit Ligand; Mast Cell Growth Factor; MGF; Stem Cell Factor; SCF; c-Kit ligand; KITLG; MGF; SCF		
Accession No.	P21583		
Formulation	Lyophilized from a 0.2 µm filtered solution of 20mM PB, 150mM NaCl, pH 7.0.		
Quality Control	Bioactivity*	Measured by the dose-dependent stimulation of Human TF-1 cells. ED50 is less than 2 ng/ml. Specific Activity of 5.0 x 10^5 IU/mg.	
	Purity:	Greater than 95% as determined by reducing SDS-PAGE.	
	Endotoxin:	Less than 0.1 ng/µg (1 IEU/µg).	
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature listed below.		
Storage	Lyophilized protein should be stored at < -20°C, though stable at room temperature for 3 weeks. Reconstituted protein solution can be stored at 4-7°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.		
Amino Acid Sequence	MEGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPGMDVLPSCWISSEMVVQLSDSLTDLLDKFSNIS EGLSNYSIIDKLVNIVD DLVECVKENSSKDLKKSFKSPEPRLFTPEEFFRIFNRSIDAFKDFVVASETSDCVVSSTLSPEKDSRV SVTKPFMLPPVA		
Background	Stem Cell Factor (SCF, KITLG) is a hematopoietic growth factor that exerts its activity at the early stages of hematopoiesis. It 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.SCF has been shown to act synergistically with colony stimulating factors. It is a ligand for the receptor-type protein-tyrosine kinase KIT. KITLG/SCF binding can activate several signaling pathways. It promotes phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase, and subsequent activation of the kinase AKT1. SCF and KIT also transmit signals via GRB2 and activation of RAS, RAF1 and the MAP kinases MAPK1/ERK2 and/or MAPK3/ERK1. The complexes 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.		

SDS-PAGE

