

SCF active protein

Human SCF

CATALOG # AAA79223	HOST E Coli	REACTIVITY Human
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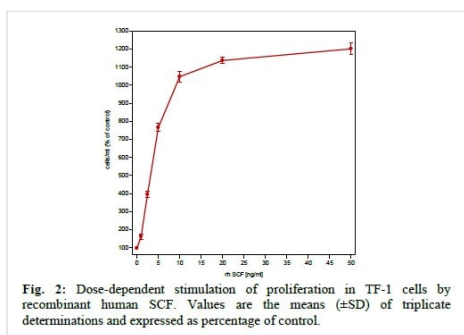
PRODUCT SYNONYMS

SCF; Human SCF; Recombinant Human SCF (Stem Cell Factor); Mast cell growth factor; Stem cell factor; c-Kit ligand; SCF active protein

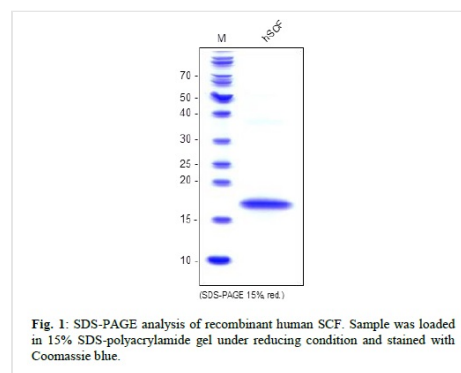
PRODUCT SPECIFICATIONS

Host	E Coli
Reactivity	Human
Purity/Purification	> 98% by SDS-PAGE & silver stain
Form/Format	Lyophilized
Sequence	N-Terminal Sequence:U NDERWORK!
Sequence Length	273
Endotoxin Level	< 0.1ng/ug of human SCF
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 5x10 ⁵ IU/mg.
Reconstitution	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 degree C.
Preparation and Storage	Lyophilized SCF although stable at room temperature for 3 weeks, should be stored desiccated below -18 degree C. Upon reconstitution SCF should be stored at 4 degree C between 2-7 days and for future use below -18 degree C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

IMAGES



Application Data



Application Data

ADDITIONAL INFORMATION

Related Product Information for SCF active protein	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.
Product Categories/Family for SCF active protein	Cytokines & Growth Factors
References	1. Ashman LK Int J Biochem Cell Biol 31 (1999); 2. Sette et al, Int J Dev Biol 44 (2000); 3. Yoshida et al, J Invest Dermatol Symp Proc 6 (2001); 4. Erlandsson et al, Exp Cell Res 301 (2004); 5. Kapur et al, Blood 100 (2002); 6. Wang et al, Arterioscler Thromb Vasc Biol 27 (2007); 7. Bashamboo et al, J Cell Sci 119 (2006); 8. Reber et al, Eur J Pharmacol 533 (2006); 9. Huang et al, Cell 63 (1990); 10. Arakawa et al, J Biol Chem 266 (1991); 11. Majumdar et al, J Biol Chem 269 (1994); 12. Brannan et al, Proc Natl Acad Sci (1991); 13. Flanagan et al, Cell 64 (1991); 14. Martin et al, Cell 63 (1990); 15. Lemmon et al, J Biol Chem 272 (1997); 16. Kanellakis et al, Cardiovasc Res 70 (2006);

NCBI AND UNIPROT INFORMATION

NCBI GI #	4505175
NCBI GeneID	4254
NCBI Accession #	NP_000890.1
NCBI GenBank Nucleotide #	NM_000899.4
UniProt Accession #	P21586; Q16487; Q68DZ2; Q7M4N8; Q9UQK7; A0AV09; A8K2Q4; B7ZLM4; P21583
Molecular Weight	18.5 kDa
NCBI Official Full Name	kit ligand isoform b
NCBI Official Synonym Full Names	KIT ligand
NCBI Official Symbol	KITLG
NCBI Official Synonym Symbols	SF; MGF; SCF; FPH2; KL-1; Kitl; SHEP7
NCBI Protein Information	kit ligand; c-Kit ligand; steel factor; stem cell factor; mast cell growth factor; familial progressive hyperpigmentation 2
UniProt Protein Name	Kit ligand
UniProt Gene Name	KITLG
UniProt Synonym Gene Names	MGF; SCF; MGF; SCF; sKITLG
UniProt Entry Name	SCF_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.