



20150720BB

Anti-Human SCF (#13F4)

**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

Cat.-no.:	101-M621
Size:	100 µg
Lot. No.:	According to product label

Preparation: This antibody was produced from a hybridoma (mouse myeloma fused with spleen cells from a mouse) immunized with recombinant human SCF.

Target Background

Synonyms (Target):	KITLG; SF; MGF; SCF; FPH2; KL-1; Kitl; SHEP7; kit-ligand
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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 human SCF consists of a 189 amino acid (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 alternately spliced isoform of human SCF lacks 28 aa that encompasses the primary proteolytic recognition site. Within the ECD of the short isoform (corresponding to this recombinant protein), human SCF shares 75 - 83% aa sequence identity with canine, feline, mouse, and rat SCF. Rat SCF is active on mouse and human cells, but human SCF is only weakly active on mouse cells. Noncovalent 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.

Database References Target

Protein RefSeq:	NP_000890
Uniprot ID:	P21583
mRNA RefSeq:	NM_000899

Product Specifications

Host	Mouse
Reactivity against	Human
Clonality	Monoclonal Antibody
Clone	(#13F4)
Isotype	IgG1
Purification	Protein G chromatography
Antigen	recombinant human SCF
Formulation	lyophilized
Reconstitution buffer	PBS (sterile)

Reconstitution: Reconstitute the antibody with 200 µl sterile PBS and the final concentration is 500 µg/ml.

Stability: Lyophilized samples are stable for 2 years from date of receipt when stored at -70°C. Reconstituted antibody can be aliquoted and stored frozen at < -20 °C for at least for six months without detectable loss of activity.

Remarks: This antibody was selected for its ability to detect human SCF.

**AVOID REPEATED FREEZE AND THAW CYCLES!**

Applications

The antibody can be used within the following applications:

WB, IHC (P)

Recommended usage:

WB: Use at 1:500-1000

IHC (Paraffin):

NOTE: OPTIMAL DILUTIONS SHOULD BE DETERMINED BY EACH LABORATORY FOR EACH APPLICATION!



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Application/Handling

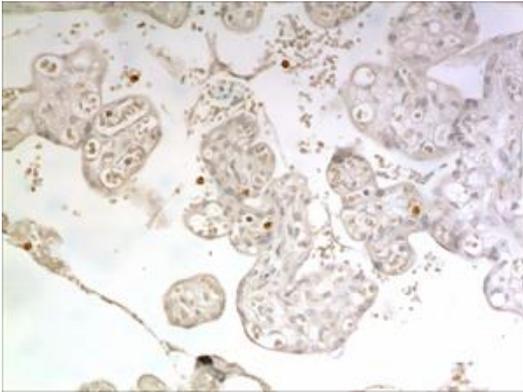


Fig. 1: A 10% Buffer formalin fixed and paraffin embedded human placental tissue section (4um) is subjected to IHC staining using a mouse anti-human SCF monoclonal antibody. Tissue section was pretreated in citric buffer (ph6.0) with microwave for antigen retrieval before IHC is applied.