

SCF Rabbit pAb

Catalog # AP99043

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	P21583
Other Accession	P21583
Reactivity	Rat, Human, Mouse
Predicted	Goat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	30899
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human SCF
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the SCF family.
SUBUNIT	Homodimer, non-covalently linked (Probable). Heterotetramer with KIT, binding two KIT molecules; thereby mediates KIT dimerization and subsequent activation by autophosphorylation.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	<p>Stem Cell Factor (SCF), also known as c-Kit ligand (KL), steel factor (SLF) and mast cell growth factor (MGF), is a 30 kDa glycoprotein with broad activities on various tissues, including hematopoietic cells, pigment cells, and primordial germ cells. SCF is secreted by endothelial cells, fibroblasts, and bone marrow stromal cells as a membrane-bound form which may be cleaved to release the soluble form. Both forms are active in promoting colony formation from murine bone marrow cells, but membrane-bound SCF is more effective in promoting hematopoieses in vivo, suggesting a role in cellular interactions between hematopoietic and stromal cells. The soluble form is thought to exist in solution as a noncovalently linked dimer. SCF is structurally related to M-CSF (CSF-1) and Flt-3/Flk-2 Ligand (FL) with all three sharing a similar size, existence of transmembrane and soluble forms, four conserved cysteines, and alternative splicing exon locations, but they share little sequence homology. SCF alone is a modest colony stimulating factor. However, in the presence of other cytokines such as EPO, TPO, GM-CSF, G-CSF, M-CSF, IL-3, and IL-7, SCF is a potent costimulant that works synergistically to increase the size of myeloid, erythroid or lymphoid lineage colonies without influencing the lineage differentiation of the progenitors.</p>

Additional Information

Gene ID	4254
Other Names	DCUA; DFNA69; FPH2; FPHH; KL-1; Kitl; MGF; SCF; SF; SHEP7; SLF; WS2F;

SCF_HUMAN; KITLG; Mast cell growth factor (MGF); Stem cell factor (SCF); c-Kit ligand; KIT ligand; mast cell growth factor; stem cell factor; steel factor; familial progressive hyperpigmentation 2

Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=1ug/Test
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	KITLG (HGNC:6343)
Synonyms	MGF, SCF
Function	Ligand for the receptor-type protein-tyrosine kinase KIT. 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. KITLG/SCF binding can activate several signaling pathways. Promotes phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase, and subsequent activation of the kinase AKT1. KITLG/SCF and KIT also transmit signals via GRB2 and activation of RAS, RAF1 and the MAP kinases MAPK1/ERK2 and/or MAPK3/ERK1. KITLG/SCF and KIT 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. KITLG/SCF acts synergistically with other cytokines, probably interleukins.
Cellular Location	[Isoform 1]: Cell membrane; Single-pass type I membrane protein [Soluble KIT ligand]: Secreted.

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