

**SCF Antibody**  
**Catalog # ASC10905****Specification**

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**SCF Antibody - Product Information**

Application	WB, IHC-P, IF, E
Primary Accession	<a href="#">P21583</a>
Other Accession	<a href="#">P21583</a> , <a href="#">134289</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 30 kDa

Application Notes	<b>Observed: 45 kDa KDa</b> <b>SCF antibody can be used for detection of SCF by Western blot at 1 - 2 µg/mL.</b> <b>Antibody can also be used for immunohistochemistry starting at 2.5 µg/mL. For immunofluorescence start at 20 µg/mL.</b>
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**SCF Antibody - Additional Information**

Gene ID	4254
<b>Target/Specificity</b>	
KITLG;	

**Reconstitution & Storage**

SCF antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

**Precautions**

SCF Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**SCF Antibody - 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

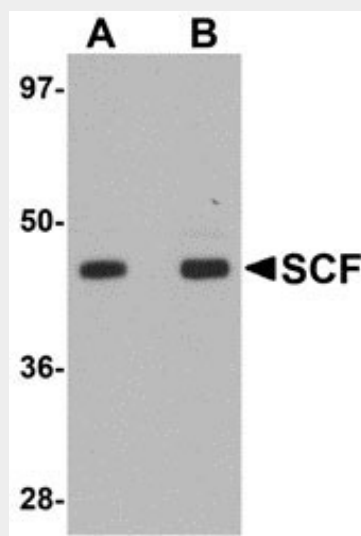
[Isoform 1]: Cell membrane; Single-pass type I membrane protein [Soluble KIT ligand]: Secreted.

#### SCF Antibody - Protocols

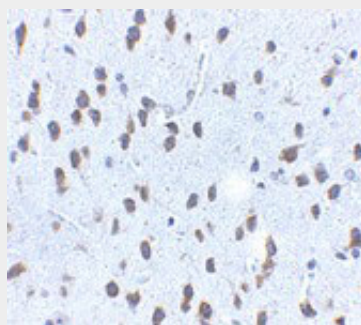
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

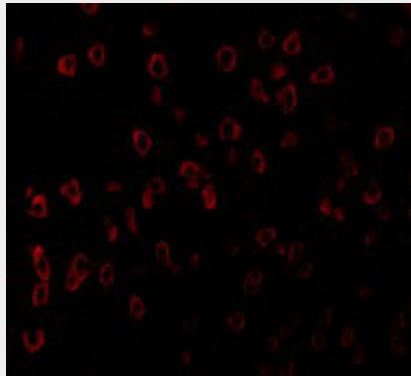
#### SCF Antibody - Images



Western blot analysis of SCF in rat brain tissue lysate with SCF antibody at (A) 1 and (B) 2 µg/mL.



Immunohistochemistry of SCF in mouse brain tissue with SCF antibody at 2.5 µg/mL.



Immunofluorescence of SCF in Human Brain tissue with SCF antibody at 20 µg/mL.

### **SCF Antibody - Background**

SCF Antibody: Stem cell factor (SCF) is the ligand of the c-Kit oncogene and is expressed by various structural and inflammatory cells in the airways. Binding of SCF by the c-Kit receptor leads to homodimerization of the receptor and the activation of signalling pathways such as PI-3, PLC-gamma, Jak/STAT, and MAP kinase pathways. SCF expression leads to the induction of mast cell survival and the expression and release of histamine, pro-inflammatory cytokines and chemokines. The inhibition of the SCF/c-Kit pathway leads to a decrease in histamine levels, mast cell and eosinophil infiltration, IL-4 production and airway hyperresponsiveness, suggesting this pathway may be a useful therapeutic target in inflammatory diseases such as asthma. At least two isoforms of SCF are known to exist.

### **SCF Antibody - References**

Reber L, Da Silva CA, and Frossard N. Stem cell factor and its receptor c-Kit as targets for inflammatory diseases. *Euro. J. Pharmacology* 2006; 533:327-40.  
Jensen BM, Metcalfe DD, and Gilfillan AM. Targeting kit activation: a potential therapeutic approach in the treatment of allergic inflammation. *Inflamm. Allergy Drug Targets* 2007; 6:57-62.  
Lukacs NW, Strieter RM, Lincoln PM, et al. Stem cell factor (c-kit ligand) influences eosinophil recruitment and histamine levels in allergic airway inflammation. *J. Immunol.* 1996; 156:3945-51.