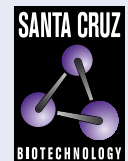


SCF (G-3): sc-13126



The Power to Question

BACKGROUND

Stem cell factor (SCF) is the ligand for the transmembrane tyrosine kinase receptor proto-oncogene c-Kit. SCF, also designated KL, MGF and SLF, is a pleiotropic cytokine that has two alternatively spliced forms, 248 and 220 amino acids in length in human and mouse systems, respectively. Both the larger form and the smaller form are cleaved to produce soluble forms. The smaller splice variant lacks the proteolytic cleavage site, between amino acids 149 and 177 of the larger SCF form. The larger SCF form is expressed in fibroblasts, brain and thymus, while the smaller SCF form is found in the spleen, testis, placenta and cerebellum. The SCF ligand is essential for the development of germ cells, hematopoietic progenitor cells and melanocyte precursors. With respect to mast cells, SCF can stimulate the proliferation of mature mast cells as well as the maturation and proliferation of immature mast cells.

CHROMOSOMAL LOCATION

Genetic locus: KITLG (human) mapping to 12q21.32; Kitl (mouse) mapping to 10 D1.

SOURCE

SCF (G-3) is a mouse monoclonal antibody raised against amino acids 26-214 of SCF of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SCF (G-3) is available conjugated to agarose (sc-13126 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13126 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13126 PE), fluorescein (sc-13126 FITC), Alexa Fluor® 488 (sc-13126 AF488), Alexa Fluor® 546 (sc-13126 AF546), Alexa Fluor® 594 (sc-13126 AF594) or Alexa Fluor® 647 (sc-13126 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-13126 AF680) or Alexa Fluor® 790 (sc-13126 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

SCF (G-3) is recommended for detection of SCF of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:200-2,000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

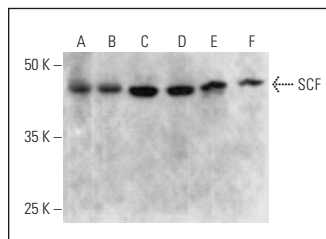
Suitable for use as control antibody for SCF siRNA (h): sc-39734, SCF siRNA (m): sc-39735, SCF shRNA Plasmid (h): sc-39734-SH, SCF shRNA Plasmid (m): sc-39735-SH, SCF shRNA (h) Lentiviral Particles: sc-39734-V and SCF shRNA (m) Lentiviral Particles: sc-39735-V.

Molecular Weight of SCF: 45 kDa.

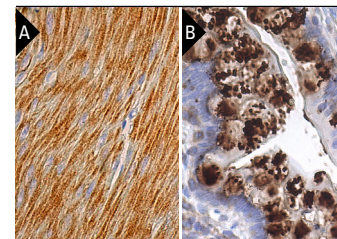
Positive Controls: NCI-H1299 whole cell lysate: sc-364234, Neuro-2A whole cell lysate: sc-364185 or NIH/3T3 whole cell lysate: sc-2210.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA

SCF (G-3): sc-13126. Western blot analysis of SCF expression in MG-63 (A), NCI-H1299 (B), NIH/3T3 (C), Neuro-2A (D), C6 (E) and PC-12 (F) whole cell lysates.



SCF (G-3): sc-13126. Immunoperoxidase staining of formalin fixed, paraffin-embedded human smooth muscle tissue showing cytoplasmic staining of smooth muscle cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of goblet cells (B).

SELECT PRODUCT CITATIONS

- Ikawa, M., et al. 2002. Restoration of spermatogenesis by lentiviral gene transfer: offspring from infertile mice. *Proc. Natl. Acad. Sci. USA* 99: 7524-7529.
- Fowler, P.A., et al. 2008. In utero exposure to low doses of environmental pollutants disrupts fetal ovarian development in sheep. *Mol. Hum. Reprod.* 14: 269-280.
- Krasagakis, K., et al. 2009. Co-expression of KIT receptor and its ligand stem cell factor in Merkel cell carcinoma. *Dermatology* 218: 37-43.
- Krasagakis, K., et al. 2011. KIT receptor activation by autocrine and paracrine stem cell factor stimulates growth of merkel cell carcinoma *in vitro*. *J. Cell. Physiol.* 226: 1099-1109.
- Xu, B.J., et al. 2012. Identification of blood protein biomarkers that aid in the clinical assessment of patients with malignant glioma. *Int. J. Oncol.* 40: 1995-2003
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- Gao, C., et al. 2015. SCF, regulated by HIF-1 α , promotes pancreatic ductal adenocarcinoma cell progression. *PLoS ONE* 10: e0121338.
- Cho, K.A., et al. 2017. Th17 cell-mediated immune responses promote mast cell proliferation by triggering stem cell factor in keratinocytes. *Biochem. Biophys. Res. Commun.* 487: 856-861.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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