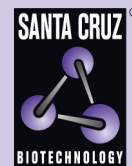


# SCF (N-19): sc-1302



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 as well as the maturation and proliferation of immature mast cells.

## REFERENCES

1. Copeland, N.G., et al. 1990. Mast cell growth factor maps near the steel locus on mouse chromosome 10 and is deleted in a number of steel alleles. *Cell* 63: 175-183.
2. Martin, F.H., et al. 1990. Primary structure and functional expression of rat and human stem cell factor DNAs. *Cell* 63: 203-211.
3. Huang, E.J., et al. 1992. Differential expression and processing of two cell associated forms of the Kit-ligand: KL-1 and KL-2. *Mol. Biol. Cell* 3: 349-362.

## CHROMOSOMAL LOCATION

Genetic locus: KITLG (human) mapping to 12q21.32.

## SOURCE

SCF (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of SCF of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc1302 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SCF (N-19) is recommended for detection of SCF of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SCF (N-19) is also recommended for detection of SCF in additional species, including equine, bovine, porcine and feline.

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

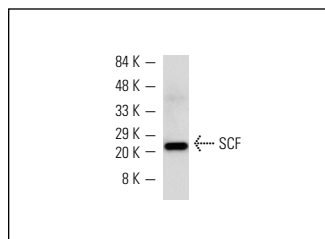
Molecular Weight of SCF: 45 kDa.

Positive Controls: A549 cell lysate: sc-2413 or SW480 cell lysate: sc-2219.

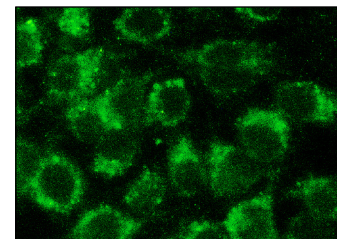
## STORAGE

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

## DATA



SCF (N-19): sc-1302. Western blot analysis of human recombinant stem cell factors.



SCF (N-19): sc-1302. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Treff, N.R., et al. 2004. Human Kit ligand promoter is positively regulated by HMGA1 in breast and ovarian cancer cells. *Oncogene* 23: 8557-8562.
2. Kawai, A., et al. 2004. Establishment and characterization of a biphasic synovial sarcoma cell line, SYO-1. *Cancer Lett.* 204: 105-113.
3. Vacanti, V., et al. 2005. Phenotypic changes of adult porcine mesenchymal stem cells induced by prolonged passaging in culture. *J. Cell. Physiol.* 205: 194-201.
4. Honecker, F., et al. 2006. Germ cell lineage differentiation in non-seminomatous germ cell tumours. *J. Pathol.* 208: 395-400.
5. Gashaw, I., et al. 2007. Novel germ cell markers characterize testicular seminoma and fetal testis. *Mol. Hum. Reprod.* 13: 721-727.
6. Stoop, H., et al. 2008. Stem cell factor as a novel diagnostic marker for early malignant germ cells. *J. Pathol.* 216: 43-54.
7. Kaprova-Pleskacova, J., et al. 2014. Complete androgen insensitivity syndrome: factors influencing gonadal histology including germ cell pathology. *Mod. Pathol.* 27: 721-730.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Guaranteed

Try **SCF (G-3): sc-13126**, our highly recommended monoclonal alternative to SCF (N-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **SCF (G-3): sc-13126**.