SANTA CRUZ BIOTECHNOLOGY, INC.

SCF (G-19): sc-1303

SANTA CRUZ BIOTECHNOLOGY

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.

CHROMOSOMAL LOCATION

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

SOURCE

SCF (G-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, sc-1303 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

RESEARCH USE

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

APPLICATIONS

SCF (G-19) is recommended for detection of SCF of mouse, rat and 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).

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.

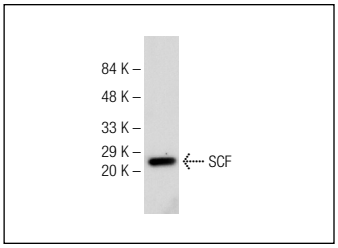
Molecular Weight of SCF: 45 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, SW480 cell lysate: sc-2219 or A549 cell lysate: sc-2413.

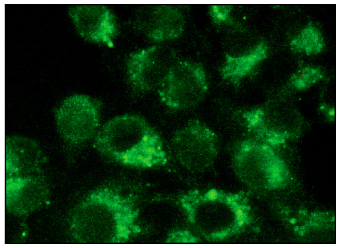
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



SCF (G-19): sc-1303. Western blot analysis of human recombinant SCF protein.



SCF (G-19): sc-1303. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

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2. Doneda, L., et al. 2002. KL/KIT co-expression in mouse fetal oocytes. Int. J. Dev. Biol. 46: 1015-1021.
3. Calvi, L.M., et al. 2003. Osteoblastic cells regulate the haematopoietic stem cell niche. Nature 425: 841-846.
4 Rich, A., et al. 2003. Local presentation of Steel factor increases expression of c-Kit immunoreactive interstitial cells of Cajal in culture. Am. J. Physiol. Gastrointest. Liver Physiol. 284: G313-G320.
5. Runyan, C., et al. 2006. Steel factor controls midline cell death of primordial germ cells and is essential for their normal proliferation and migration. Development 133: 4861-4869.
6. Chen, S.R., et al. 2013. Disruption of genital ridge development causes aberrant primordial germ cell proliferation but does not affect their directional migration. BMC Biol. 11: 22.
7. Tan, K.S., et al. 2015. Localized SCF and IGF-1 secretion enhances erythropoiesis in the spleen of murine embryos. Biol. Open 4: 596-607.