SANTA CRUZ BIOTECHNOLOGY, INC.

c-Kit (Ab 81): sc-13508

BACKGROUND

The c-Kit proto-oncogene is a member of the receptor tyrosine kinase family and, more specifically, is closely related to the platelet derived growth factor receptor (PDGFR). c-Kit, the normal cellular homolog of the HZ4-feline sarcoma virus transforming gene (v-Kit), encodes a transmembrane receptor. c-Kit regulates a variety of biological responses including chemotaxis, cell proliferation, apoptosis and adhesion. c-Kit is also identical with the product of the W locus in mice and, as such, is integral to the development of mast cells and hematopoiesis. The ligand for the c-Kit receptor (KL) has been identified and is encoded at the murine steel (Sl) locus. Kit is the human homolog of the proto-oncogene c-Kit. Mutations in Kit are integral for tumor growth and progression in various cancers.

CHROMOSOMAL LOCATION

Genetic locus: KIT (human) mapping to 4q12.

SOURCE

c-Kit (Ab 81) is a mouse monoclonal antibody raised against full length c-Kit.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

c-Kit (Ab 81) is available conjugated to agarose (sc-13508 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-13508 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13508 PE), Alexa Fluor® 488 (sc-13508 AF488), Alexa Fluor® 546 (sc-13508 AF546), Alexa Fluor® 594 (sc-13508 AF594) or Alexa Fluor® 647 (sc-13508 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-13508 AF680) or Alexa Fluor® 790 (sc-13508 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

c-Kit (Ab 81) is recommended for detection of c-Kit 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), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for c-Kit siRNA (h): sc-29225, c-Kit shRNA Plasmid (h): sc-29225-SH and c-Kit shRNA (h) Lentiviral Particles: sc-29225-V.

Molecular Weight of c-Kit precursor: 120 kDa.

Molecular Weight of mature c-Kit: 145 kDa.

Positive Controls: TT whole cell lysate: sc-364195, HEL 92.1.7 cell lysate: sc-2270 or CCRF-HSB-2 cell lysate: sc-2265.

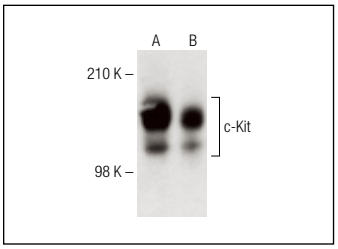
RESEARCH USE

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

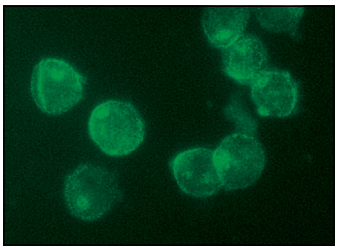
STORAGE

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

DATA



c-Kit (Ab 81): sc-13508. Western blot analysis of c-Kit expression in HEL 92.1.7 (**A**) and TT (**B**) whole cell lysates.



c-Kit (Ab 81): sc-13508. Immunofluorescence staining of methanol-fixed TF-1 cells showing membrane staining.

SELECT PRODUCT CITATIONS

1. Cruz, A.C., et al. 2004. Tumor necrosis factor α-converting enzyme controls surface expression of c-Kit and survival of embryonic stem cell-derived mast cells. J. Biol. Chem. 279: 5612-5620.
2. Angelini, A., et al. 2011. Stem-cell therapy in an experimental model of pulmonary hypertension and right heart failure: role of paracrine and neurohormonal milieu in the remodeling process. J. Heart Lung Transplant. 30: 1281-1293.
3. Skardal, A., et al. 2013. Substrate elasticity controls cell proliferation, surface marker expression and motile phenotype in amniotic fluid-derived stem cells. J. Mech. Behav. Biomed. Mater. 17: 307-316.
4. Youssef, A., et al. 2014. Low-oxygen tension and IGF-I promote proliferation and multipotency of placental mesenchymal stem cells (PMSCs) from different gestations via distinct signaling pathways. Endocrinology 155: 1386-1397.
5. Zorzan, E., et al. 2016. Screening of candidate G-quadruplex ligands for the human c-KIT promotorial region and their effects in multiple *in vitro* models. Oncotarget 7: 21658-21675.
6. Franceschi, S., et al. 2017. Loss of c-Kit expression in thyroid cancer cells. PLoS ONE 12: e0173913.
7. Kadivar, A., et al. 2018. Antiproliferative effects of imatinib mesylate on ZR-75-1 and MDA-MB-231 cell lines via PDGFR-β, PDGF-BB, c-Kit and SCF expression. Int. J. Mol. Med. 42: 414-424.
8. Patil, S., et al. 2019. Culture and characterization of human dental pulp-derived stem cells as limbal stem cells for corneal damage repair. Mol. Med. Rep. 20: 4688-4694.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.