

c-Kit (104D2): sc-19983

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.

REFERENCES

1. Besmer, P., et al. 1986. A new acute transforming feline retrovirus and relationship of its oncogene v-Kit with the protein kinase gene family. *Nature* 320: 415-417.
2. Yarden, Y., et al. 1987. Human proto-oncogene c-Kit: a new cell surface receptor kinase for an unidentified ligand. *EMBO J.* 6: 3341-3347.
3. Majumder, S., et al. 1988. c-Kit protein, a transmembrane kinase: identification in tissues and characterization. *Mol. Cell. Biol.* 8: 4896-5002.
4. Chabot, B., et al. 1988. The proto-oncogene c-Kit encoding a transmembrane tyrosine kinase receptor maps to the mouse W locus. *Nature* 335: 88-89.

CHROMOSOMAL LOCATION

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

SOURCE

c-Kit (104D2) is a mouse monoclonal antibody raised against CD117 expressed on human megakaryocytic cell line MOLM-1.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

c-Kit (104D2) is available conjugated to either phycoerythrin (sc-19983 PE) or fluorescein (sc-19983 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

c-Kit (104D2) is recommended for detection of c-Kit of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

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.

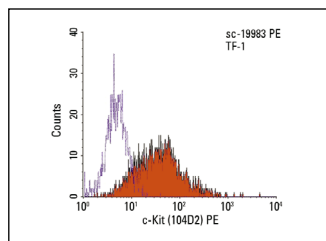
Molecular Weight of c-Kit precursor: 120 kDa.

Molecular Weight of mature c-Kit: 145 kDa.

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 (104D2) PE: sc-19983 PE. FCM analysis of TF-1 cells. Black line histogram represents the isotype control, normal mouse IgG₁-PE: sc-2866.

SELECT PRODUCT CITATIONS

1. Wihlidal, P., et al. 2006. Expression and functional significance of osteocalcin splicing in disease progression of hematological malignancies. *Leuk. Res.* 30: 1241-1248.
2. Stevenson, K.S., et al. 2009. Isolation, characterisation and differentiation of Thy-1.1 sorted pancreatic adult progenitor cell populations. *Stem Cells Dev.* 18: 1389-1398.
3. Liebertz, D.J., et al. 2010. Establishment and characterization of a novel head and neck squamous cell carcinoma cell line USC-HN1. *Head Neck Oncol.* 2: 5.
4. Russell, S.M., et al. 2011. USC-HN2, a new model cell line for recurrent oral cavity squamous cell carcinoma with immunosuppressive characteristics. *Oral Oncol.* 47: 810-817.
5. Crema, A., et al. 2011. Cord blood CD133 cells define an OV6-positive population that can be differentiated *in vitro* into engraftable bipotent hepatic progenitors. *Stem Cells Dev.* 20: 2009-2021.
6. Russell, S.M., et al. 2013. Establishment and characterization of a new human extragonadal germ cell line, SEM-1, and its comparison with TCam-2 and JKT-1. *Urology* 81: 464.e1-464.e9.
7. Micheva-Viteva, S.N., et al. 2013. c-Kit signaling is targeted by pathogenic *Yersinia* to suppress the host immune response. *BMC Microbiol.* 13: 249.
8. Sadeghian-Nodoushan, F., et al. 2016. Pluripotency and differentiation of cells from human testicular sperm extraction: an investigation of cell stemness. *Mol. Reprod. Dev.* 83: 312-323.

RESEARCH USE

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

CONJUGATES

See **c-Kit (E-3): sc-365504** for c-Kit antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.