

## c-Kit (2B8): sc-19619



The Power to Question

## 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: 415-421.
2. Yarden, Y., et al. 1987. Human proto-oncogene c-Kit: a new cell surface receptor kinase for an unidentified ligand. *EMBO J.* 6: 3341-3351.

## CHROMOSOMAL LOCATION

Genetic locus: Kit (mouse) mapping to 5 C3.3.

## SOURCE

c-Kit (2B8) is a rat monoclonal antibody raised against bone marrow mast cells of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

c-Kit (2B8) is available conjugated to either phycoerythrin (sc-19619 PE) or fluorescein (sc-19619 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

## APPLICATIONS

c-Kit (2B8) is recommended for detection of c-Kit of mouse and rat origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10<sup>6</sup> cells).

c-Kit (2B8) is also recommended for detection of c-Kit in additional species, including porcine.

Suitable for use as control antibody for c-Kit siRNA (m): sc-29852, c-Kit siRNA (r): sc-63363, c-Kit shRNA Plasmid (m): sc-29852-SH, c-Kit shRNA Plasmid (r): sc-63363-SH, c-Kit shRNA (m) Lentiviral Particles: sc-29852-V and c-Kit shRNA (r) Lentiviral Particles: sc-63363-V.

Molecular Weight of c-Kit precursor: 120 kDa.

Molecular Weight of mature c-Kit: 145 kDa.

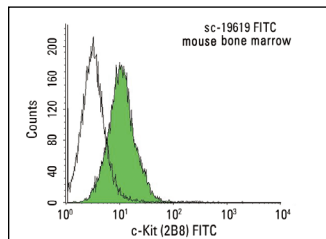
## RESEARCH USE

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 (2B8) FITC: sc-19619 FITC. FCM analysis of mouse bone marrow cells. Black line histogram represents the isotype control, normal rat IgG<sub>2b</sub>-PE: sc-2873.

## SELECT PRODUCT CITATIONS

1. Lee, E.J., et al. 2005. Pituitary transcription factor-1 induces transient differentiation of adult hepatic stem cells into prolactin-producing cells *in vivo*. *Mol. Endocrinol.* 19: 964-967.
2. Obokata, H., et al. 2011. The potential of stem cells in adult tissues representative of the three germ layers. *Tissue Eng. Part A* 17: 607-615.
3. Xue, C., et al. 2015. Angiotensin II promotes differentiation of mouse c-Kit-positive cardiac stem cells into pacemaker-like cells. *Mol. Med. Rep.* 11: 3249-3258.
4. Chandran, U., et al. 2016. Expression of *cnm1* and its association with stemness, cell cycle, and differentiation in spermatogenic cells in mouse testis. *Biol. Reprod.* 95: 7.
5. Bodduluri, S.R., et al. 2018. Mast cell-dependent CD8<sup>+</sup> T-cell recruitment mediates immune surveillance of intestinal tumors in *Apc*<sup>Min/+</sup> mice. *Cancer Immunol. Res.* 6: 332-347.
6. Amani, S., et al. 2019. Developing rat bone marrow derived mast cells by the splenic cells culture supernatant of rat and mouse. *Tanaffos* 18: 89-95.
7. Amani, S., et al. 2021. Angiogenic effects of cell therapy within a bio-material scaffold in a rat hind limb ischemia model. *Sci. Rep.* 11: 20545.
8. Chuang, C.K., et al. 2023. The role of SCL isoforms in embryonic hematopoiesis. *Int. J. Mol. Sci.* 24: 6427.
9. Romaus-Sanjurjo, D., et al. 2024. Neuroprotection afforded by an enriched mediterranean-like diet is modified by exercise in a rat male model of cerebral ischemia. *Antioxidants* 13: 138.



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.