SANTA CRUZ BIOTECHNOLOGY, INC.

c-Kit (2B8): sc-19619

SANTA CRUZ BIOTECHNOLOGY

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: 415-417.
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.

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_{2b} 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 10^6 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.

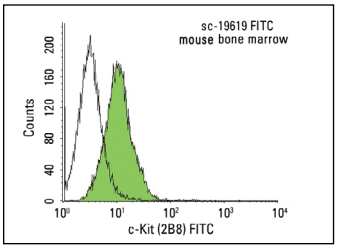
STORAGE

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.

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_{2b}-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. Del Castillo, G., et al. 2006. Autocrine production of TGF-β confers resistance to apoptosis after an epithelial-mesenchymal transition process in hepatocytes: role of EGF receptor ligands. Exp. Cell Res. 312: 2860-2871.
3. del Castillo, G., et al. 2008. Isolation and characterization of a putative liver progenitor population after treatment of fetal rat hepatocytes with TGF-β. J. Cell. Physiol. 215: 846-855.
4. 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.
5. 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.
6. Chandran, U., et al. 2016. Expression of cnnm1 and its association with stemness, cell cycle, and differentiation in spermatogenic cells in mouse testis. Biol. Reprod. 95: 7.
7. Bodduluri, S,R., et al. 2018. Mast cell-dependent $CD8^+$ T-cell recruitment mediates immune surveillance of intestinal tumors in $Apc^{Min/+}$ mice. Cancer Immunol. Res. 6: 332-347.
8. 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.
9. Amani, S., et al. 2021. Angiogenic effects of cell therapy within a biomaterial scaffold in a rat hind limb ischemia model. Sci. Rep. 11: 20545.

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.