

## c-Kit (E-1): sc-17806



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.

**CHROMOSOMAL LOCATION**

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

**SOURCE**

c-Kit (E-1) is a mouse monoclonal antibody raised against amino acids 23-322 mapping near the N-terminus of c-Kit of human origin.

**PRODUCT**

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

c-Kit (E-1) is available conjugated to agarose (sc-17806 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-17806 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-17806 PE), fluorescein (sc-17806 FITC), Alexa Fluor® 488 (sc-17806 AF488), Alexa Fluor® 546 (sc-17806 AF546), Alexa Fluor® 594 (sc-17806 AF594) or Alexa Fluor® 647 (sc-17806 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-17806 AF680) or Alexa Fluor® 790 (sc-17806 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**APPLICATIONS**

c-Kit (E-1) is recommended for detection of c-Kit of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), 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 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.

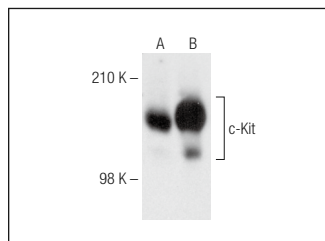
Positive Controls: CCRF-HSB-2 cell lysate: sc-2265, HEL 92.1.7 cell lysate: sc-2270 or TF-1 cell lysate: sc-2412.

**RESEARCH USE**

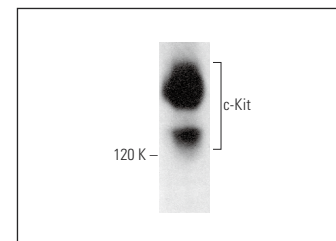
For research use only, not for use in diagnostic procedures.

**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 (E-1): sc-17806. Western blot analysis of c-Kit expression in CCRF-HSB-2 (A) and HEL 92.1.7 (B) whole cell lysates.



c-Kit (E-1): sc-17806. Western blot analysis of c-Kit expression in TF-1 whole cell lysate.

**SELECT PRODUCT CITATIONS**

1. Growney, J.D., et al. 2005. Activation mutations of human c-Kit resistant to imatinib mesylate are sensitive to the tyrosine kinase inhibitor PKC412. *Blood* 106: 721-724.
2. Fernández, A., et al. 2007. An anticancer c-Kit kinase inhibitor is reengineered to make it more active and less cardiotoxic. *J. Clin. Invest.* 117: 4044-4054.
3. Medici, D., et al. 2010. Conversion of vascular endothelial cells into multipotent stem-like cells. *Nat. Med.* 16: 1400-1406.
4. Almeida, M.Q., et al. 2011. Integrated genomic analysis of nodular tissue in macronodular adrenocortical hyperplasia: progression of tumorigenesis in a disorder associated with multiple benign lesions. *J. Clin. Endocrinol. Metab.* 96: E728-E738.
5. Kim, J.Y., et al. 2012. Co-culture of melanocytes with adipose-derived stem cells as a potential substitute for co-culture with keratinocytes. *Acta Derm. Venereol.* 92: 16-23.
6. Huang, X., et al. 2013. Targeted delivery of microRNA-29b by transferrin-conjugated anionic lipopolyplex nanoparticles: a novel therapeutic strategy in acute myeloid leukemia. *Clin. Cancer Res.* 19: 2355-2367.
7. Moiseeva, E.P., et al. 2014. CADM1 controls Actin cytoskeleton assembly and regulates extracellular matrix adhesion in human mast cells. *PLoS ONE* 9: e85980.
8. Nadai, M., et al. 2015. Assessment of gene promoter G-quadruplex binding and modulation by a naphthalene diimide derivative in tumor cells. *Int. J. Oncol.* 46: 369-380.
9. Liu, Z., et al. 2016. Internal associations and dynamic expression of c-Kit and nanog genes in ventricular remodelling induced by adriamycin. *Exp. Ther. Med.* 12: 1657-1662.

**PROTOCOLS**

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.