

c-Kit (E-3): sc-365504



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; Kit (mouse) mapping to 5 C3.3.

SOURCE

c-Kit (E-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 946-976 within the C-terminus of c-Kit of human origin.

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 (E-3) is available conjugated to agarose (sc-365504 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365504 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365504 PE), fluorescein (sc-365504 FITC), Alexa Fluor® 488 (sc-365504 AF488), Alexa Fluor® 546 (sc-365504 AF546), Alexa Fluor® 594 (sc-365504 AF594) or Alexa Fluor® 647 (sc-365504 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365504 AF680) or Alexa Fluor® 790 (sc-365504 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365504 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

c-Kit (E-3) is recommended for detection of c-Kit p145 of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

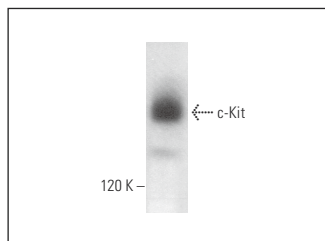
Suitable for use as control antibody for c-Kit siRNA (h): sc-29225, c-Kit siRNA (m): sc-29852, c-Kit siRNA (r): sc-63363, c-Kit shRNA Plasmid (h): sc-29225-SH, c-Kit shRNA Plasmid (m): sc-29852-SH, c-Kit shRNA Plasmid (r): sc-63363-SH, c-Kit shRNA (h) Lentiviral Particles: sc-29225-V, c-Kit shRNA (m) Lentiviral Particles: sc-29852-V and c-Kit shRNA (r) Lentiviral Particles: sc-63363-V.

Molecular Weight of c-Kit precursor: 120 kDa.

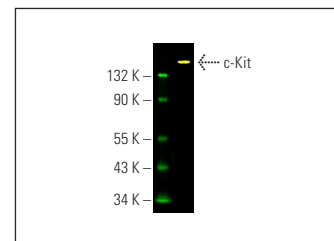
Molecular Weight of mature c-Kit: 145 kDa.

STORAGE

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

DATA

c-Kit (E-3): sc-365504. Western blot analysis of c-Kit expression in TF-1 whole cell lysate.



c-Kit (E-3) Alexa Fluor® 488: sc-365504 AF488. Direct fluorescent western blot analysis of c-Kit expression in TF-1 whole cell lysate. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker MW Tag-Alexa Fluor® 680: sc-516730.

SELECT PRODUCT CITATIONS

- Cassano, M., et al. 2012. Alteration of cardiac progenitor cell potency in GRMD dogs. *Cell Transplant.* 21: 1945-1967.
- Ndisang, J.F., et al. 2014. Mechanisms by which heme oxygenase rescue renal dysfunction in obesity. *Redox Biol.* 2: 1029-1037.
- Ndisang, J.F. and Tiwari, S. 2015. Featured article: induction of heme oxygenase with hemin improves pericardial adipocyte morphology and function in obese Zucker rats by enhancing proteins of regeneration. *Exp. Biol. Med.* 240: 45-57.
- Singla, D., et al. 2016. Fibroblast growth factor-9 activates c-Kit progenitor cells and enhances angiogenesis in the infarcted diabetic heart. *Oxid. Med. Cell. Longev.* 2016: 5810908.
- Giglio, D., et al. 2018. Changes in the neuronal control of the urinary bladder in a model of radiation cystitis. *J. Pharmacol. Exp. Ther.* 365: 327-335.
- Lilis, I., et al. 2019. Interleukin-1β provided by Kit-competent mast cells is required for KRAS-mutant lung adenocarcinoma. *Oncoimmunology* 8: 1593802.
- Kim, I.K., et al. 2020. Mutant GTF2I induces cell transformation and metabolic alterations in thymic epithelial cells. *Cell Death Differ.* 27: 2263-2279.
- Liao, Z., et al. 2021. Cardiac telocytes inhibit cardiac microvascular endothelial cell apoptosis through exosomal miRNA-21-5p-targeted cdipl1 silencing to improve angiogenesis following myocardial infarction. *Theranostics* 11: 268-291.

RESEARCH USE

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

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