

p-c-Kit (Tyr 721)-R: sc-18077-R

BACKGROUND

The c-Kit proto-oncogene has been identified as a member of the receptor tyrosine kinase family and more specifically has been shown to be 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 with a molecular weight of 145-160 kDa. c-Kit has also been shown to be 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 shown to be encoded at the murine steel (Sl) locus. Two sites on c-Kit are able to bind SH2(CHK), the Tyr 568/570 diphosphorylated sequence and the monophosphorylated Tyr 721 sequence. The Tyr 568 and Tyr 570 residues are phosphorylated *in vivo* following ligand-stimulation.

REFERENCES

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3. Chabot, B., et al. 1988. The proto-oncogene c-Kit encoding a transmembrane tyrosine kinase receptor maps to the mouse W locus. *Nature* 335: 88-90.
4. Majumder, S., et al. 1988. c-Kit protein, a transmembrane kinase: identification in tissues and characterization. *Mol. Cell Biol.* 8: 4896-5002.
5. Geissler, E.N., et al. 1988. The dominant-white spotting W locus of the mouse encodes the c-Kit proto-oncogene. *Cell* 55: 185-195.
6. Flanagan, J.G., et al. 1990. The Kit ligand: a cell surface molecule altered in steel mutant fibroblasts. *Cell* 63: 185-194.
7. Lerner, N.B., et al. 1991. Monoclonal antibody YB5.B8 identifies the human c-Kit protein product. *Blood* 77: 1876-1883.
8. Tsai, M., et al. 1991. The rat c-Kit ligand, stem cell factor, induces the development of connective tissue-type and mucosal mast cells *in vivo*. Analysis by anatomical distribution, histochemistry and protease phenotype. *J. Exp. Med.* 174: 125-131.
9. Price, D.J., et al. 1997. Direct association of Csk homologous kinase (Chk) with the diphosphorylated site Tyr 568/570 of the activated c-Kit in megakaryocytes. *J. Biol. Chem.* 272: 5915-5920.

CHROMOSOMAL LOCATION

Genetic locus: KIT (human) mapping to 4q12; Kit (mouse) mapping to 5 C3.3.

SOURCE

p-c-Kit (Tyr 721)-R is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Tyr 721 of c-Kit of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-18077 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-c-Kit (Tyr 721)-R is recommended for detection of Tyr 721 phosphorylated c-Kit 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).

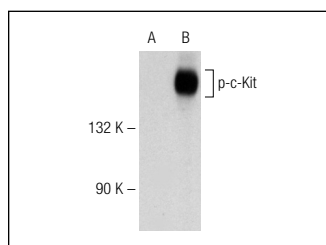
p-c-Kit (Tyr 721)-R is also recommended for detection of correspondingly phosphorylated Tyr on c-Kit in additional species, including equine, canine, bovine and porcine.

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

Molecular Weight of p-c-Kit: 120/145 kDa.

Positive Controls: A-431 + EGF whole cell lysate: sc-2202 or M07e cells + SCF.

DATA



p-c-Kit (Tyr 721): sc-18077. Western blot analysis of c-Kit phosphorylation in untreated (A) and EGF-treated (B) A-431 whole cell lysates.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.