



Orders: 877-616-CELL (2355)
orders@cellsignal.com

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Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

#9370 Store at -20C

c-Kit Antibody Sampler Kit

1 Kit (3 x 20 microliters)

For Research Use Only. Not for Use in Diagnostic Procedures.

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Phospho-c-Kit (Tyr703) (D12E12) Rabbit mAb	3073	20 µl	145 kDa	Rabbit IgG
Phospho-c-Kit (Tyr719) Antibody	3391	20 µl	120, 145 kDa	Rabbit
c-Kit (D13A2) XP [®] Rabbit mAb	3074	20 µl	120 and 145 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

Description

The c-Kit Antibody Sampler Kit provides a fast and economical means of evaluating levels of c-Kit receptor protein phosphorylated at the specified sites, as well as total c-Kit receptor levels. The kit contains enough primary and secondary antibody to perform two Western blot experiments.

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Background

c-Kit is a member of the subfamily of receptor tyrosine kinases that includes PDGF, CSF-1, and FLT3/flk-2 receptors (1,2). It plays a critical role in activation and growth in a number of cell types, including hematopoietic stem cells, mast cells, melanocytes, and germ cells (3). Upon binding with its stem cell factor (SCF) ligand, c-Kit undergoes dimerization/oligomerization and autophosphorylation. Activation of c-Kit results in the recruitment and tyrosine phosphorylation of downstream SH2-containing signaling components, including PLC γ , the p85 subunit of PI3 kinase, SHP2, and CrkL (4). Molecular lesions that impair the kinase activity of c-Kit are associated with a variety of developmental disorders (5), and mutations that constitutively activate c-Kit can lead to pathogenesis of mastocytosis and gastrointestinal stromal tumors (6). Tyr719 is located in the kinase insert region of the catalytic domain. c-Kit phosphorylated at Tyr719 binds to the p85 subunit of PI3 kinase *in vitro* and *in vivo* (7).

Background References

1. Martin, F.H. et al. (1990) *Cell* 63, 203-11.
2. Yarden, Y. et al. (1987) *EMBO J* 6, 3341-51.
3. Gommerman, J.L. et al. (1997) *J Biol Chem* 272, 30519-25.
4. Sattler, M. et al. (1997) *J Biol Chem* 272, 10248-53.
5. Nocka, K. et al. (1990) *EMBO J* 9, 1805-13.
6. Hirota, S. et al. (1998) *Science* 279, 577-80.
7. Blume-Jensen, P. et al. (2000) *Nat Genet* 24, 157-62.

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