

#3391 Store at -20°C

Phospho-c-Kit (Tyr719) Antibody



- Small 100 µl (10 western blots)
- Large 300 µl (30 western blots)

Orders ■ 877-616-CELL (2355)
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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID # 16590
Swiss-Prot Acc. # P10721

Applications	Species Cross-Reactivity*		Molecular Wt. 120, 145 kDa	Source Rabbit**
	W	H, M		
Endogenous				

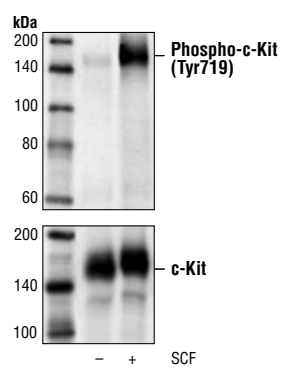
Background: c-Kit is a member of the subfamily of receptor tyrosine kinases that includes PDGF, CSF-1 and FLT3/flk-2 receptors (1,2). It plays critical controlling roles in a number of cell types such as hematopoietic stem cells, mast cells, melanocytes and germ cells (3). Upon binding with its ligand, stem cell factor (SCF), 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 PLCγ, 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), while 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).

Specificity/Sensitivity: Phospho-c-Kit (Tyr719) Antibody detects endogenous levels of c-Kit only when phosphorylated at tyrosine 719. The antibody cross-reacts with tyrosine-phosphorylated PDGF receptor.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr719 of mouse c-Kit. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

- (1) Martin, F.H. et al. (1990) *Cell* 63, 203–211.
- (2) Yarden, Y. et al. (1987) *EMBO J.* 6, 3341–3351.
- (3) Gommerman, J.L. et al. (1997) *J. Biol. Chem.* 272, 30519–30525.
- (4) Sattler, M. et al. (1997) *J. Biol. Chem.* 272, 10248–10253.
- (5) Nocka, K. et al. (1990) *EMBO J.* 9, 1805–1813.
- (6) Hirota, S. et al. (1998) *Science* 279, 577–580.
- (7) Blume-Jensen, P. et al. (2000) *Nat. Genet.* 24, 157–162.



Western blot analysis of extracts from MO7e cells, untreated or stimulated with SCF #9907 (50 ng/ml for 2 minutes), using Phospho-c-Kit (Tyr719) Antibody (upper) or c-Kit Antibody #3392 (lower).

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

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:
Western blotting 1:1000

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide

Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine

Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.