

#3391 Store at -20°C

# Phospho-c-Kit (Tyr719) Antibody

- Small 100 µl (10 Western mini-blot)
- Large 300 µl (30 Western mini-blot)



**Orders** ■ 877-616-CELL (2355)  
orders@cellsignaling.com

**Support** ■ 877-678-TECH (8324)  
info@cellsignaling.com

**Web** ■ www.cellsignaling.com

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This product is for *in vitro* research use only and is not intended for use in humans or animals. This product is not intended for use as a therapeutic or in diagnostic procedures.

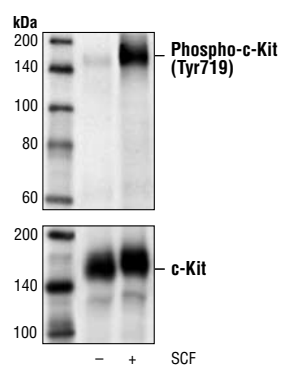
Applications	Species Cross-Reactivity*		Molecular Wt. 120, 145 kDa	Source Rabbit**
	W	H, M		
Endogenous				

**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 PLC $\gamma$ , 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 phospho-peptide (KLH-coupled) corresponding to residues surrounding Tyr719 of mouse c-Kit. Antibodies are purified by protein A and peptide affinity chromatography.

**Selected Application References:**  
Warshamana-Greene, G.S. et al. (2004) The insulin-like growth factor-I (IGF-I) receptor kinase inhibitor NVP-ADW742, in combination with STI571, delineates a spectrum of dependence of small cell lung cancer on IGF-I and stem cell factor signaling. *Mol Cancer Ther* 3, 527–536. Application: W.



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).

### 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.

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

**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.cellsignaling.com](http://www.cellsignaling.com).

- Companion Products:**
- Phospho-PDGF Receptor  $\beta$  (Tyr751) Antibody #3161
  - c-Kit Antibody #3392
  - Human Stem Cell Factor (SCF) #9907
  - Anti-rabbit IgG, HRP-linked Antibody #7074
  - Prestained Protein Marker, Broad Range (Premixed Format) #7720

Biotinylated Protein Ladder Detection Pack #7727  
20X LumiGLO<sup>®</sup> Reagent and 20X Peroxide #7003

Please visit [www.cellsignaling.com](http://www.cellsignaling.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—ELISA 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—zebra fish B—bovine

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