

**c-Kit (D13A2) XP<sup>®</sup> Rabbit mAb  
(Biotinylated)**

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M	Endogenous	120, 145	Rabbit	#P10721	3815

**Product Usage Information****Application**

Western Blotting

**Dilution**

1:1000

**Storage**

Supplied in 140 mM NaCl, 3 mM KCl, 10 mM sodium phosphate (pH 7.4) dibasic, 2 mM potassium phosphate monobasic, 2 mg/mL BSA, and 50% glycerol. Store at -20°C. *Do not aliquot the antibody.*

**Specificity/Sensitivity**

c-Kit (D13A2) XP<sup>®</sup> Rabbit mAb (Biotinylated) detects endogenous levels of total c-Kit protein. It does not cross-react with other receptor tyrosine kinase family members.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Tyr703 of human c-Kit protein.

**Description**

This Cell Signaling Technology antibody is conjugated to biotin under optimal conditions. The biotinylated antibody is expected to exhibit the same species cross-reactivity as the unconjugated c-Kit (D13A2) XP<sup>®</sup> Rabbit mAb #3074.

**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 $\gamma$ , 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), 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.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

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

**Applications Key**

**W:** Western Blotting

**Cross-Reactivity Key**

**H:** Human **M:** Mouse

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