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#3308

## c-Kit (Ab81) Mouse mAb

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

<b>Applications:</b> W, IP, IF-IC, FC-FP	<b>Reactivity:</b> H	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 120 and 145	<b>Source/Isotype:</b> Mouse IgG1	<b>UniProt ID:</b> #P10721	<b>Entrez-Gene Id:</b> 3815
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### Product Usage Information

#### Application

Western Blotting  
Immunoprecipitation  
Immunofluorescence (Immunocytochemistry)  
Flow Cytometry (Fixed/Permeabilized)

#### Dilution

1:1000  
1:50  
1:1600 - 1:6400  
1:100 - 1:400

### 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.

For a carrier free (BSA and azide free) version of this product see product #62379.

### Specificity/Sensitivity

c-Kit (Ab81) Mouse mAb 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 recombinant proteins containing the cytoplasmic domain of human c-Kit.

### 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 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), 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

- Martin, F.H. et al. (1990) *Cell* 63, 203-11.
- Yarden, Y. et al. (1987) *EMBO J* 6, 3341-51.
- Gommerman, J.L. et al. (1997) *J Biol Chem* 272, 30519-25.
- Sattler, M. et al. (1997) *J Biol Chem* 272, 10248-53.
- Nocka, K. et al. (1990) *EMBO J* 9, 1805-13.
- Hirota, S. et al. (1998) *Science* 279, 577-80.
- 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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

### Applications Key

**W:** Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

### Cross-Reactivity Key

**H:** Human

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