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#37805

c-Kit (D3W6Y) XP® Rabbit mAb

Cell Signaling TECHNOLOGY®

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Entrez-Gene ID #3815
UniProt ID #P10721

New 01/24/18

For Research Use Only. Not For Use In Diagnostic Procedures.

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IHC-P	H	120, 145 kDa	Rabbit IgG**
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 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:

(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.

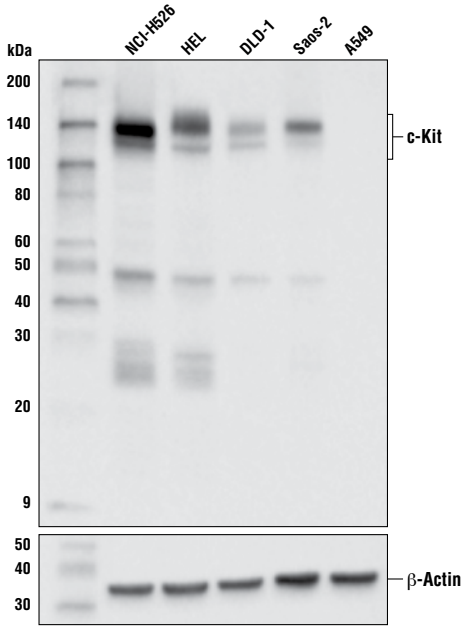
(5) Nocka, K. et al. (1990) *EMBO J* 9, 1805-13.

(6) Hirota, S. et al. (1998) *Science* 279, 577-80.

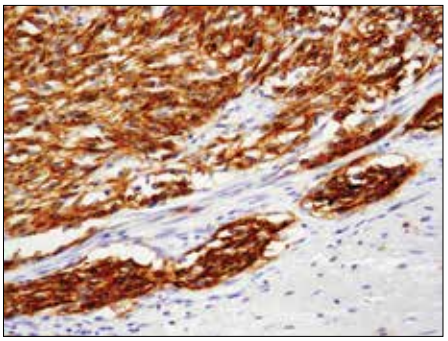
(7) Blume-Jensen, P. et al. (2000) *Nat Genet* 24, 157-62.

Specificity/Sensitivity: c-Kit (D3W6Y) XP® Rabbit mAb recognizes endogenous levels of total c-Kit protein. This antibody is predicted to detect multiple isoforms of c-Kit.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val955 of human c-Kit protein.



Western blot analysis of extracts from various cell lines using c-Kit (D3W6Y) XP® Rabbit mAb (upper) and β-actin (D6A8) Rabbit mAb #8457 (lower).



Immunohistochemical analysis of paraffin-embedded human gastrointestinal stromal tumor using c-Kit (D3W6Y) XP® Rabbit mAb.

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.*

***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
Immunoprecipitation	1:200
Immunohistochemistry (Paraffin)	1:100†

Unmasking buffer: SignalStain® Citrate Unmasking Solution (10X) #14746
Antibody diluent: SignalStain® Antibody Diluent #8112
Detection reagent: SignalStain® Boost (HRP, Rabbit) #8114
†*Optimal IHC dilutions determined using SignalStain® Boost*

Immunohistochemistry (Leica® Bond™)	1:100

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com

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

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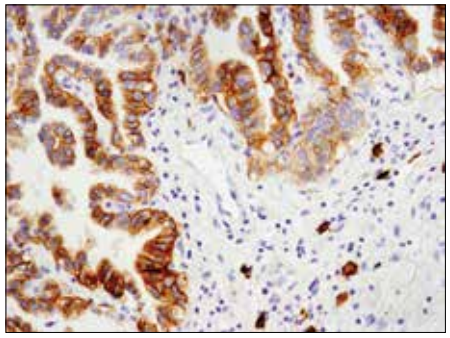
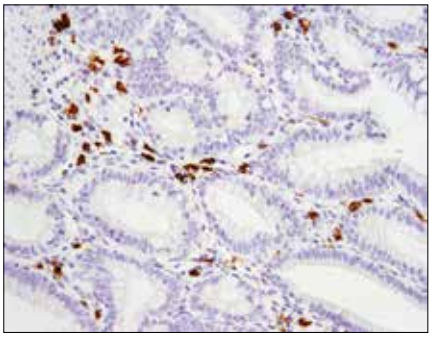
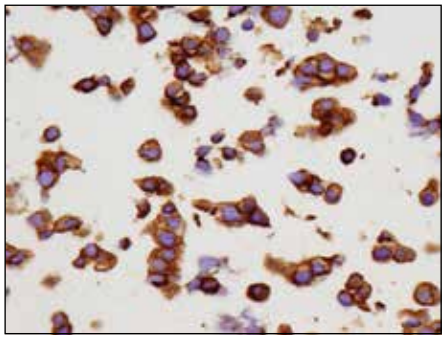
Applications: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide **Species Cross-Reactivity:** **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **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.

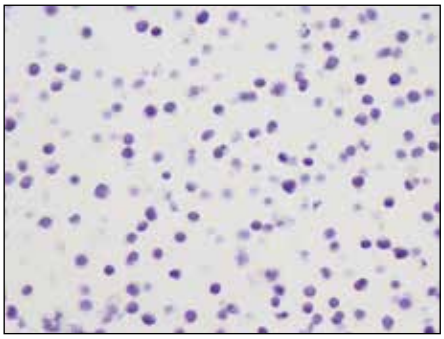


Immunohistochemical analysis of paraffin-embedded human lung carcinoma using c-Kit (D3W6Y) XP® Rabbit mAb.

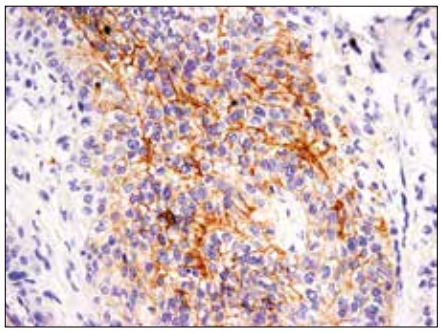


Immunohistochemical analysis of paraffin-embedded human colon carcinoma using c-Kit (D3W6Y) XP® Rabbit mAb.

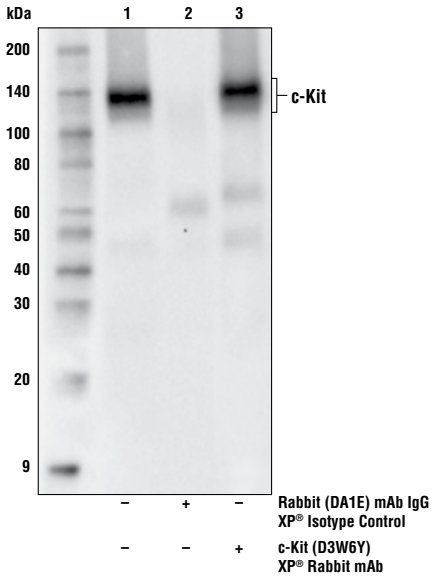




Immunohistochemical analysis of paraffin-embedded NCI-H526 cell pellet (left, positive) or Jurkat cell pellet (right, negative) using c-Kit (D3W6Y) XP® Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded human squamous cell lung carcinoma using c-Kit (D3W6Y) XP® Rabbit mAb performed on the Leica® Bond™ Rx.



Immunoprecipitation of c-Kit protein from NCI-H526 cell extracts. Lane 1 is 10% input, lane 2 is Rabbit (DA1E) mAb IgG XP® Isotype Control #3900, and lane 3 is c-Kit (D3W6Y) XP® Rabbit mAb. Western blot analysis was performed using c-Kit (D3W6Y) XP® Rabbit mAb.