Revision 1

#12008 Store at -20C

FoxK2 Antibody

Cell Signaling TECHNOLOGY®

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IP	H Mk	Endogenous	79	Rabbit	#Q01167	3607

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50

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.

Specificity / Sensitivity

FoxK2 Antibody recognizes endogenous levels of total FoxK2 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human FoxK2 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Forkhead box (Fox) proteins are a family of evolutionarily conserved transcription factors defined by the presence of a winged helix DNA binding domain called a Forkhead box (1). In humans, there are over 40 known Fox protein family members, divided into 19 subfamilies, which have evolved to regulate gene transcription in diverse and highly specialized biological contexts throughout development (2). Mutations that disrupt the expression of Fox gene family members have consequently been implicated in a broad array of human disorders, including immunological dysfunction, infertility, speech/language disorders, and cancer (3,4).
FoxK1 and FoxK2 belong to one of the subfamilies of Fox proteins and contain a forkhead-associated (FHA) domain and a conserved forkhead DNA binding domain (5). FoxK2 was initially identified as a regulator of IL-2 transcription (6). Studies have shown that FoxK2 binds to DNA harboring G/T mismatches and might be involved in DNA mismatch repair (7). FoxK2 also mediates the oncogenic function of adenovirus (Adv) oncoprotein E1A and papillomavirus E6 proteins via association with these proteins (8). Moreover, FoxK2 promotes AP-1-mediated transcriptional regulation by enhancing the recruitment of AP-1 to chromatin (9). FoxK2 is phosphorylated at Ser368 and Ser423 in a CDK1-cyclin B-dependent manner and is involved in cell cycle regulation (10).

Background References

1. Myatt, S.S. and Lam, E.W. (2007) *Nat Rev Cancer* 7, 847-59.
2. Jackson, B.C. et al. (2010) *Hum Genomics* 4, 345-52.
3. Hannenhalli, S. and Kaestner, K.H. (2009) *Nat Rev Genet* 10, 233-40.
4. Benayoun, B.A. et al. (2011) *Trends Genet* 10, 224-32.
5. Katoh, M. and Katoh, M. (2004) *Int J Mol Med* 14, 127-32.
6. Li, C. et al. (1991) *Proc Natl Acad Sci U S A* 88, 7739-43.
7. Fujii, Y. and Nakamura, M. (2010) *J Biochem* 147, 705-9.
8. Komorek, J. et al. (2010) *J Virol* 84, 2719-31.
9. Ji, Z. et al. (2012) *Mol Cell Biol* 32, 385-98.
10. Marais, A. et al. (2010) *J Biol Chem* 285, 35728-39.

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

WB: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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 **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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Limited Uses