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FoxO4 Antibody


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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	H M R Mk	Endogenous	65	Rabbit	#P98177	4303

Product Usage Information	Application Western Blotting	Dilution 1:1000
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	The FoxO4 Antibody detects endogenous levels of FoxO4. The antibody is sensitive to phosphorylation within the antigen and preferentially detects unphosphorylated FoxO4. The antibody does not recognize FoxO4b.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ser71 of human FoxO4a. Antibodies are purified by protein A and peptide affinity chromatography.	
Background	The Forkhead family of transcription factors is involved in tumorigenesis of rhabdomyosarcoma and acute leukemias (1-3). Within the family, three members (FoxO1, FoxO4, and FoxO3a) have sequence similarity to the nematode orthologue DAF-16, which mediates signaling via a pathway involving IGFR1, PI3K, and Akt (4-6). Active forkhead members act as tumor suppressors by promoting cell cycle arrest and apoptosis. Increased expression of any FoxO member results in the activation of the cell cycle inhibitor p27 Kip1. Forkhead transcription factors also play a part in TGF-β-mediated upregulation of p21 Cip1, a process negatively regulated through PI3K (7). Increased proliferation results when forkhead transcription factors are inactivated through phosphorylation by Akt at Thr24, Ser256, and Ser319, which results in nuclear export and inhibition of transcription factor activity (8). Forkhead transcription factors can also be inhibited by the deacetylase sirtuin (SirT1) (9).	
Background References	1. Anderson, M.J. et al. (1998) <i>Genomics</i> 47, 187-99. 2. Galili, N. et al. (1993) <i>Nat Genet</i> 5, 230-5. 3. Borkhardt, A. et al. (1997) <i>Oncogene</i> 14, 195-202. 4. Nakae, J. et al. (1999) <i>J Biol Chem</i> 274, 15982-5. 5. Rena, G. et al. (1999) <i>J Biol Chem</i> 274, 17179-83. 6. Guo, S. et al. (1999) <i>J Biol Chem</i> 274, 17184-92. 7. Seoane, J. et al. (2004) <i>Cell</i> 117, 211-23. 8. Arden, K.C. (2004) <i>Mol Cell</i> 14, 416-8. 9. Yang, Y. et al. (2005) <i>EMBO J</i> 24, 1021-32.	

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
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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