

#9461 Store at -20°C

Phospho-FoxO1 (Ser256) Antibody


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

Applications: WB	Reactivity: H M R Mk	Sensitivity: Endogenous	MW (kDa): 82	Source: Rabbit	UniProt ID: #Q12778	Entrez-Gene Id: 2308
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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	Phospho-FoxO1 (Ser256) Antibody detects endogenous levels of FoxO1 only when phosphorylated at serine 256. The antibody cross-reacts with FoxO4 phosphorylated at Ser193.	
Species predicted to react based on 100% sequence homology:	Chicken, Zebrafish, Bovine	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues around Ser256 of human FoxO1. 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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