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Phospho-MOB1 (Thr12) (D2E3) Rabbit mAb


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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB	H M R Mk	Endogenous	24	Rabbit IgG	#Q9H8S9, #Q7L9L4	55233, 92597

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, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.	
Specificity / Sensitivity	Phospho-MOB1 (Thr12) (D2E3) Rabbit mAb recognizes endogenous levels of MOB1 protein only when phosphorylated at Thr12.	
Species predicted to react based on 100% sequence homology:	Xenopus, Horse	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr12 of human MOB1 protein.	
Background	MOB1 was first identified in yeast as a protein that binds to Mps with essential roles in the completion of mitosis and the maintenance of ploidy (1). Its <i>Drosophila</i> and mammalian homologs, Mats and MOB1, respectively, are involved in the Hippo signaling tumor suppressor pathway, which plays a critical role in organ size regulation and which has been implicated in cancer development (2-5). There are two MOB1 proteins in humans, MOB1A and MOB1B, that are encoded by two different genes but which have greater than 95% amino acid sequence identity (6). Both forms bind to members of the nuclear Dbf2-related (NDR) kinases, such as LATS1/2 and NDR1/2, thereby stimulating kinase activity (7-9). This binding is promoted by the phosphorylation of MOB1 at several threonine residues (e.g., Thr12, Thr35) by MST1 and/or MST2 (5,10). Phosphorylation at Thr12 by MST1/2 stabilizes MOB1, enhancing its binding and regulation of LATS1 (5). The resultant increase in LATS1 kinase activity promotes inhibitory phosphorylation of the transcriptional co-activators YAP and TAZ (11,12), leading to changes in the expression of genes involved in cell cycle progression (13).	
Background References	- Luca, F.C. and Winey, M. (1998) <i>Mol Biol Cell</i> 9, 29-46. - Edgar, B.A. (2006) <i>Cell</i> 124, 267-73. - Saucedo, L.J. and Edgar, B.A. (2007) <i>Nat Rev Mol Cell Biol</i> 8, 613-21. - Harvey, K. and Tapon, N. (2007) <i>Nat Rev Cancer</i> 7, 182-91. - Zeng, Q. and Hong, W. (2008) <i>Cancer Cell</i> 13, 188-92. - Praskova, M. et al. (2008) <i>Curr Biol</i> 18, 311-21. - Devroe, E. et al. (2004) <i>J Biol Chem</i> 279, 24444-51. - Hergovich, A. et al. (2005) <i>Mol Cell Biol</i> 25, 8259-72. - Hergovich, A. et al. (2006) <i>Biochem Biophys Res Commun</i> 345, 50-8. - Hirabayashi, S. et al. (2008) <i>Oncogene</i> 27, 4281-92. - Zhao, B. et al. (2007) <i>Genes Dev</i> 21, 2747-61. - Lei, Q.Y. et al. (2008) <i>Mol Cell Biol</i> 28, 2426-36. - Hao, Y. et al. (2008) <i>J Biol Chem</i> 283, 5496-509.	

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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