

#13748 Store at -20°C

Phospho-c-Myc (Ser62) (E1J4K) Rabbit mAb



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB	H M R	Endogenous	62	Rabbit IgG	#P01106	4609

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-c-Myc (Ser62) (E1J4K) Rabbit mAb recognizes endogenous levels of c-Myc protein only when phosphorylated at Ser62. This antibody may not recognize c-Myc phosphorylated at Ser62 when Thr58 is also phosphorylated.	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser62 of human c-Myc protein.	
Background	<p>Members of the Myc/Max/Mad network function as transcriptional regulators with roles in various aspects of cell behavior, including proliferation, differentiation, and apoptosis (1). These proteins share a common basic-helix-loop-helix leucine zipper (bHLH-ZIP) motif required for dimerization and DNA-binding. Max was originally discovered based on its ability to associate with c-Myc and found to be required for the ability of Myc to bind DNA and activate transcription (2). Subsequently, Max has been viewed as a central component of the transcriptional network, forming homodimers as well as heterodimers with other members of the Myc and Mad families (1). The association between Max and either Myc or Mad can have opposing effects on transcriptional regulation and cell behavior (1). The Mad family consists of four related proteins; Mad1, Mad2 (Mxi1), Mad3, and Mad4, and the more distantly related members of the bHLH-ZIP family, Mnt and Mga. Like Myc, the Mad proteins are tightly regulated with short half-lives. In general, Mad family members interfere with Myc-mediated processes, such as proliferation, transformation, and prevention of apoptosis by inhibiting transcription (3,4).</p> <p>Phosphorylation of c-Myc at Thr58 and Ser62 can control proteasomal-dependent degradation of the transcription factor. Phosphorylation of c-Myc at these sites is a stepwise process, whereby mitogens, mitosis, or cellular stress induce phosphorylation at Ser62, which serves as a priming site for GSK-3 phosphorylation of Thr58 (5-9).</p>	
Background References	<ol style="list-style-type: none"> 1. Baudino, T.A. and Cleveland, J.L. (2001) <i>Mol Cell Biol</i> 21, 691-702. 2. Blackwood, E.M. and Eisenman, R.N. (1991) <i>Science</i> 251, 1211-7. 3. Henriksson, M. and Lüscher, B. (1996) <i>Adv Cancer Res</i> 68, 109-82. 4. Grandori, C. et al. (2000) <i>Annu Rev Cell Dev Biol</i> 16, 653-99. 5. Lutterbach, B. and Hann, S.R. (1994) <i>Mol Cell Biol</i> 14, 5510-22. 6. Gregory, M.A. et al. (2003) <i>J Biol Chem</i> 278, 51606-12. 7. Yada, M. et al. (2004) <i>EMBO J</i> 23, 2116-25. 8. Seo, H.R. et al. (2008) <i>J Biol Chem</i> 283, 15601-10. 9. Benassi, B. et al. (2006) <i>Mol Cell</i> 21, 509-19. 	

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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