

#3929 Store at -20C

Phospho-4E-BP1 (Thr37/46) (236B4) Rabbit mAb (Biotinylated)



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB	H M R Mk Dm	Endogenous	15 to 20	Rabbit IgG	#Q13541	1978

Product Usage Information	Application	Dilution
	Western Blotting	1:1000
Storage	Supplied in 136 mM NaCl, 2.6 mM KCl, 12 mM sodium phosphate (pH 7.4) dibasic, 2 mg/ml BSA, and 50% glycerol. Store at -20°C. Do not aliquot the antibodies.	
Specificity / Sensitivity	Phospho-4E-BP1 (Thr37/46) (236B4) Rabbit mAb detects endogenous levels of 4E-BP1 only when phosphorylated at Thr37 and/or Thr46. This antibody may cross-react with 4E-BP2 and 4E-BP3 when phosphorylated at analagous sites.	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr37 and Thr46 of mouse 4E-BP1.	
Product Description	This Cell Signaling Technology (CST) antibody is conjugated to biotin under optimal conditions. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated Phospho-4E-BP1 (Thr37/46) (236B4) Rabbit mAb #2855.	

MW (kDa) 15 to 20

Background	Translation repressor protein 4E-BP1 (also known as PHAS-1) inhibits cap-dependent translation by binding to the translation initiation factor eIF4E. Hyperphosphorylation of 4E-BP1 disrupts this interaction and results in activation of cap-dependent translation (1). Both the PI3 kinase/Akt pathway and FRAP/mTOR kinase regulate 4E-BP1 activity (2,3). Multiple 4E-BP1 residues are phosphorylated <i>in vivo</i> (4). While phosphorylation by FRAP/mTOR at Thr37 and Thr46 does not prevent the binding of 4E-BP1 to eIF4E, it is thought to prime 4E-BP1 for subsequent phosphorylation at Ser65 and Thr70 (5).
Background References	<ol style="list-style-type: none"> 1. Pause, A. et al. (1994) <i>Nature</i> 371, 762-7. 2. Brunn, G.J. et al. (1997) <i>Science</i> 277, 99-101. 3. Gingras, A.C. et al. (1998) <i>Genes Dev</i> 12, 502-13. 4. Fadden, P. et al. (1997) <i>J Biol Chem</i> 272, 10240-7. 5. Gingras, A.C. et al. (1999) <i>Genes Dev</i> 13, 1422-37.

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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