

Store at +4°C
#7547

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



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Applications: FC-FP	Reactivity: H M R Mk Dm	Sensitivity: Endogenous	Source/Isotype: Rabbit IgG	UniProt ID: #Q13541	Entrez-Gene Id: 1978
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Product Usage Information	Application Flow Cytometry (Fixed/Permeabilized)	Dilution 1:50
Storage	Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibodies. Protect from light. Do not freeze.	
Specificity / Sensitivity	Phospho-4E-BP1 (Thr37/46) (236B4) Rabbit mAb (PE Conjugate) 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 equivalent 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 antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometry analysis in human cells. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated Phospho-4E-BP1 (Thr37/46) (236B4) Rabbit mAb #2855.	
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).
Applications Key	FC-FP: Flow Cytometry (Fixed/Permeabilized)
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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