

Store at  
4°C

#2846

# Phospho-4E-BP1 (Thr37/46) (236B4) Rabbit mAb (Alexa Fluor® 488 Conjugate)



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Entrez-Gene ID #1978  
UniProt ID #Q13541

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For Research Use Only. Not For Use In Diagnostic Procedures.

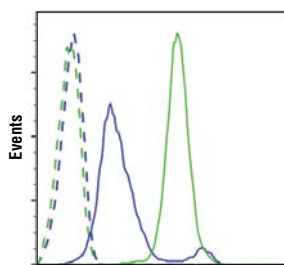
Applications	Species Cross-Reactivity*	Isotype
F Endogenous	H, M, R, Mk, Dm	Rabbit IgG

**Description:** Cell Signaling Technology antibody conjugated to Alexa Fluor® 488 fluorescent dye and tested in-house for direct flow cytometric analysis of human cells. The unconjugated antibody, #2855, reacts with Phospho-4E-BP1 (Thr37/46) from human, mouse, rat and monkey. CST expects that Phospho-4E-BP1 (Thr37/46) (236B4) Rabbit mAb (Alexa Fluor® 488 Conjugate) will also recognize Phospho-4E-BP1 in these species.

**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 *in vivo* (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).

**Specificity/Sensitivity:** Phospho-4E-BP1 (Thr37/46) (236B4) Rabbit mAb (Alexa Fluor® 488 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. The antibody was conjugated to Alexa Fluor® 488 under optimal conditions with an F/P ratio of 2-5.



Phospho-NDRG1 (Thr346) (Alexa Fluor® 647 Conjugate)

Flow cytometric analysis of Jurkat cells, untreated (green) or treated with LY294002 #9901 (50  $\mu$ M, 2 hr), Wortmanin #9951 (1  $\mu$ M, 2 hr) and U0126 #9903 (10  $\mu$ M, 2 hr) using Phospho-4E-BP1 (Thr37/46) (236B4) Rabbit mAb (Alexa Fluor® 488 Conjugate) (solid lines) or concentration-matched Rabbit (DA1E) mAb IgG XP® Isotype Control (Alexa Fluor® 647 Conjugate) #2985 (dashed lines).

**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 antibody. Protect from light. Do not freeze.

\*Species cross-reactivity other than human is determined by western using the unconjugated antibody.

#### Recommended Antibody Dilutions:

Flow Cytometry 1:50

For product specific protocols and a complete listing of recommended companion products please see the product web page at [www.cellsignal.com](http://www.cellsignal.com).

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U. S. Patent No. 5,675,063

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.