

**Cat. No:** MAB-94214  
**Conjugate:** Unconjugated  
**Size:** 100 ug  
**Clone:** 236B4  
**Concentration:** 1mg/ml  
**Host:** Rb  
**Isotype:** IgG  
**Reactivity:** Hu, Ms, Rt  
**Applications:** WB 1:1000  
**Molecular Weight:** 15-20 kDa

**Purification:** : Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr37 and Thr46 of mouse 4E-BP1 protein.

**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). 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 equivalent sites. Non-specific staining has been observed in mitotic cells by immunofluorescence.

**Form:** liquid  
**Buffer:** PBS with 0.02% sodium azide, 50% glycerol, pH7.3.  
**Storage:** Store at -20°C. Avoid freeze / thaw cycles.

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