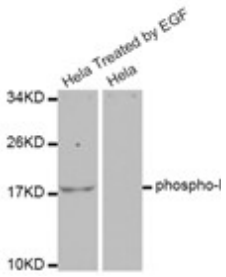
Product Data Sheet: Phospho-EIF4EBP1 (T37/46)

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.



Western blot analysis on Hela cells using Phospho-4E-BP1 (Thr37/46) (236B4) monoclonal antibody

References

(1) Pause, A. et al. (1994) Nature 371, 762-7. (2) Brunn, G.J. et al. (1997) Science 277, 99-101. (3) Gingras, A.C. et al. (1998) Genes Dev 12, 502-13. (4) Fadden, P. et al. (1997) J Biol Chem 272, 10240-7. (5) Gingras, A.C. et al. (1999) Genes Dev 13, 1422-37..