

Cat. No: MAB-94215
Conjugate: Unconjugated
Size: 100 ug
Clone: D7F61
Concentration: 1mg/ml
Host: Rb
Isotype: IgG
Reactivity: Hu, Ms, Rt
Applications: WB: 1:1000
Molecular Weight: 15 kDa

Purification: Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr70 of human 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 (Thr70) (D7F61) Rabbit mAb recognizes endogenous levels of 4E-BP1 protein only when phosphorylated at Thr70.

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

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..

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