

#8594 Store at -20°C

4E-BP1 (53H11) Rabbit mAb (Biotinylated)



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

Applications W Endogenous	Species Cross-Reactivity* H, M, R, Mk	Molecular Wt. 15-20 kDa	Isotype Rabbit IgG
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Description: This Cell Signaling Technology antibody is conjugated to biotin under optimal conditions. The biotinylated antibody is expected to exhibit the same species cross-reactivity as the unconjugated 4E-BP1 (53H11) Rabbit mAb #9644.

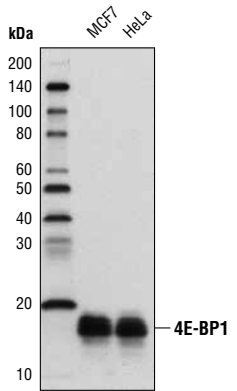
Background: Translation repressor protein 4E-BP1 (also known as PHAS-1) inhibits cap-dependent translation by binding to the translation initiation factor eIF4E. Hyperphosphorylation of 4E-BP1 disrupts this interaction and results in activation of cap-dependent translation (1). Both the PI3 kinase/Akt 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: 4E-BP1 (53H11) Rabbit mAb detects endogenous levels of total 4E-BP1 protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ser112 of human 4E-BP1 protein.

Background References:

- (1) Pause, A. et al. (1994) *Nature* 371, 762-767.
- (2) Brunn, G.J. et al. (1997) *Science* 277, 99-101.
- (3) Gingras, A.C. et al. (1998) *Genes Dev.* 12, 502-513.
- (4) Fadden, P. et al. (1997) *J. Biol. Chem.* 272, 10240-10247.
- (5) Gingras, A.C. et al. (1999) *Genes Dev.* 13, 1422-1437.



Western blot analysis of extracts from MCF7 and HeLa cells using 4E-BP1 (53H11) Rabbit mAb (Biotinylated).

Entrez-Gene ID #1978
UniProt ID #Q13541

Storage: Supplied in 136 mM NaCl, 2.6 mM KCl, 12 mM sodium phosphate (pH 7.4) dibasic, 2 mg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

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

Biotinylated antibodies are designed to be detected using streptavidin or anti-Biotin antibody conjugates.

Recommended Antibody Dilutions:

Western blotting 1:1000

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: 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.

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