

Phospho-eIF4B (Ser422) Antibody

✓ 100 µl
(10 western blots)

Orders ■ 877-616-CELL (2355)
orders@cellsignal.com
Support ■ 877-678-TECH (8324)
info@cellsignal.com
Web ■ www.cellsignal.com

rev. 03/18/10

This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W	H, M, R, Mk	80 kDa	Rabbit**

Background: Eukaryotic initiation factor 4B (eIF4B) is thought to assist the eIF4F complex in translation initiation. In plants, eIF4B is known to interact with the poly-(A) binding protein, increasing its poly-(A) binding activity (1). Heat shock and serum starvation cause dephosphorylation of eIF4B at multiple sites with kinetics similar to those of the corresponding inhibition of translation, while phosphorylation of eIF4B following insulin treatment correlates well with an observed increase in translation (2-5). Multiple kinases, including p70 S6 kinase, can phosphorylate eIF4B *in vitro*, and at least one serum-inducible eIF4B phosphorylation site is sensitive to rapamycin and LY294002 (6).

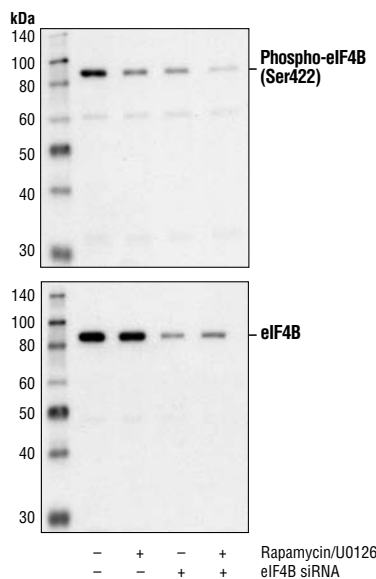
p70 S6 Kinase has been shown to phosphorylate eIF4B at the rapamycin-sensitive site Ser422 *in vivo*, and a Ser422Ala mutant of eIF4B shows diminished activity in an *in vitro* translation assay (7).

Specificity/Sensitivity: Phospho-eIF4B (Ser422) Antibody detects eIF4B only when phosphorylated at Ser422.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser422 of human eIF4B. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

- Le, H. et al. (1997) *J. Biol. Chem.* 272, 16247-16255.
- Duncan, R.F. and Hershey, J.W. (1989) *J. Cell Biol.* 109, 1467-1481.
- Duncan, R.F. and Hershey, J.W. (1984) *J. Biol. Chem.* 259, 11882-11889.
- Duncan, R. and Hershey, J.W. (1985) *J. Biol. Chem.* 260, 5493-5497.
- Manzella, J.M. et al. (1991) *J. Biol. Chem.* 266, 2383-2389.
- Gingras, A.C. et al. (2001) *Genes Dev.* 15, 807-826.
- Raught, B. et al. (2004) *EMBO J.* 23, 1761-1769.



Western blot analysis of extracts from HeLa cells using Phospho-eIF4B (Ser422) Antibody (upper) or eIF4B Antibody #3592 (lower). 48 hours following transfection, cells were treated with Rapamycin (50 nM) and U0126 (10 µM) as indicated.

Entrez-Gene ID #1975
Swiss-Prot Acc. #P23588

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

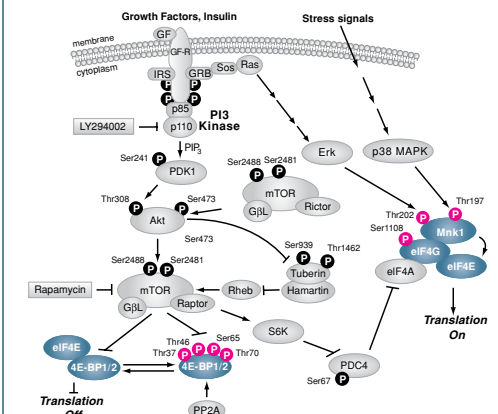
**Anti-rabbit secondary antibodies must be used to detect this antibody.

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.