

**#4838** Store at **-20°C**

# Phospho-S6 Ribosomal Protein (Ser240/244) (61H9) Rabbit mAb

- Small 100  $\mu$ l (10 western blots)
- Large 300  $\mu$ l (30 western blots)
- Petite 40  $\mu$ l (4 western blots)

rev. 03/24/10



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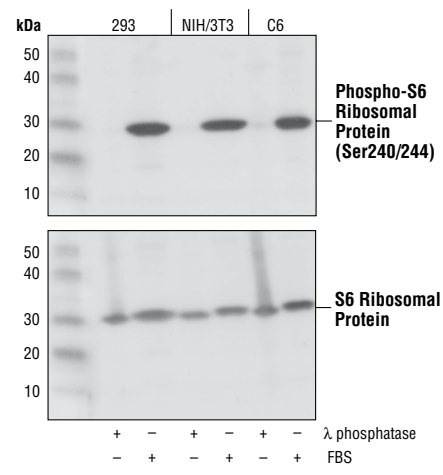
**Entrez-Gene ID** #6194  
**Swiss-Prot Acc.** #P62753

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IF-IC, F Endogenous	H, M, R, Mk	32 kDa	Rabbit IgG**

**Background:** One way that growth factors and mitogens effectively promote sustained cell growth and proliferation is by upregulating mRNA translation (1,2). Growth factors and mitogens induce the activation of p70 S6 kinase and the subsequent phosphorylation of the S6 ribosomal protein. Phosphorylation of S6 ribosomal protein correlates with an increase in translation of mRNA transcripts that contain an oligopyrimidine tract in their 5' untranslated regions (2). These particular mRNA transcripts (5'TOP) encode proteins involved in cell cycle progression as well as ribosomal proteins and elongation factors necessary for translation (2,3). Important S6 ribosomal protein phosphorylation sites include several residues (Ser235, Ser236, Ser240 and Ser244) located within a small, carboxy-terminal region of the S6 protein (4,5).

**Specificity/Sensitivity:** Phospho-S6 Ribosomal Protein (Ser240/244) (61H9) Rabbit mAb detects endogenous levels of ribosomal protein S6 only when phosphorylated at serines 240 and 244.

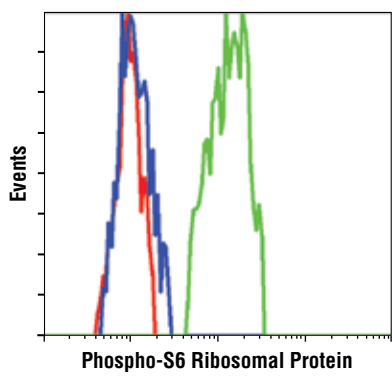
**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser240 and Ser244 of human S6 ribosomal protein.



Western blot analysis of extracts from 293, NIH/3T3 and C6 cells, treated with  $\lambda$  phosphatase or 20% serum (20 min) as indicated, using Phospho-S6 Ribosomal Protein (Ser240/244) (61H9) Rabbit mAb (upper), or S6 Ribosomal Protein (5G10) Rabbit mAb #2217 (lower).

**Background References:**

- (1) Dufner, A. and Thomas, G. (1999) *Exp. Cell Res.* 253, 100–109.
- (2) Peterson, R.T. and Schreiber, S.L. (1998) *Curr. Biol.* 8, R248–R250.
- (3) Jefferies, H.B. et al. (1997) *EMBO J.* 16, 3693–3704.
- (4) Ferrari, S. et al. (1991) *J. Biol. Chem.* 266, 22770–22775.
- (5) Flotow, H. and Thomas, G. (1992) *J. Biol. Chem.* 267, 3074–3078.



Flow cytometric analysis of Jurkat cells, untreated (green), or LY294002, Wortmannin and U0126-treated (blue), using Phospho-S6 Ribosomal Protein (Ser240/244) (61H9) Rabbit mAb compared to a nonspecific negative control antibody (red).

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at  $-20^{\circ}\text{C}$ . 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
Immunofluorescence (IF-IC)	1:200
Flow Cytometry	1:100

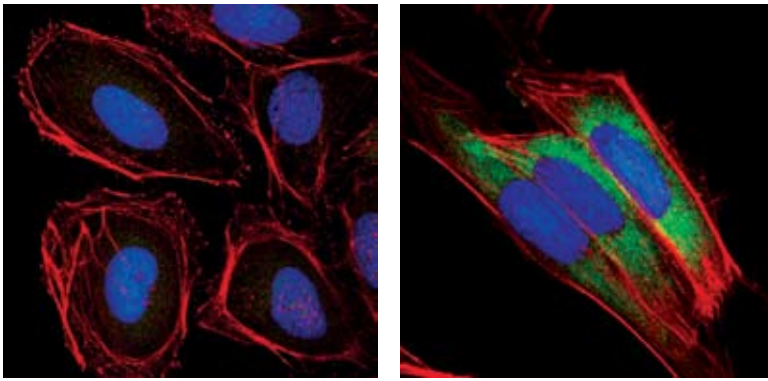
**For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).**

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**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.**

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**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.



*Confocal immunofluorescent analysis of HeLa cells, LY294002-treated (left) or 20% serum-treated (right), using Phospho-S6 Ribosomal Protein (Ser240/244) (61H9) Rabbit mAb (green). Actin filaments have been labeled with Alexa Fluor® 555 phalloidin (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).*