

# S6 Ribosomal Protein (54D2) Mouse mAb

100 µl  
 (10 western blots)

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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.

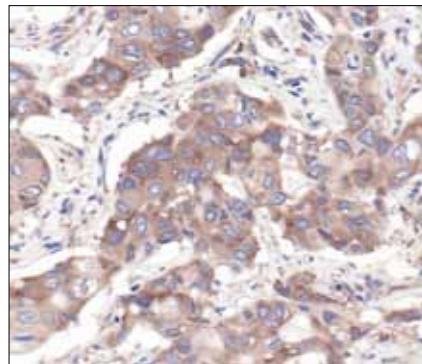
**Entrez-Gene ID** #6194  
**Swiss-Prot Acc.** #P62753

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IHC-P, IF-IC, F Endogenous	H, M, R, Mk, Dm	32 kDa	Mouse IgG1**

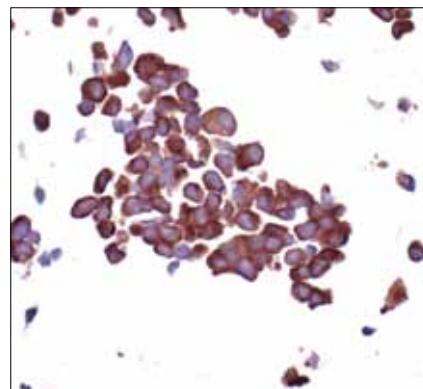
**Background:** One way that growth factors and mitogens effectively promote sustained cell growth and proliferation is by upregulating mRNA translation (1,2). Growth factors and mitogens induce the activation of p70 S6 kinase and the subsequent phosphorylation of the S6 ribosomal protein. Phosphorylation 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:** S6 Ribosomal Protein (54D2) Mouse mAb detects endogenous levels of total S6 ribosomal protein independent of phosphorylation.

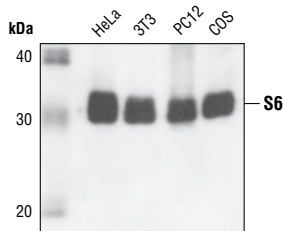
**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a recombinant fusion protein corresponding to full-length human S6 ribosomal protein.



Immunohistochemical analysis of paraffin-embedded human lung carcinoma, using S6 Ribosomal Protein (54D2) Mouse mAb.



Immunohistochemical analysis of paraffin-embedded LNCaP cells, using S6 Ribosomal Protein (54D2) Mouse mAb.



Western blot analysis of extracts from HeLa, NIH/3T3, PC12 and COS cells, using S6 Ribosomal Protein (54D2) Mouse mAb.

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**\*Species cross-reactivity is determined by western blot.**

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

**Recommended Antibody Dilutions:**

Western blotting	1:1000
Immunoprecipitation	1:100
Immunohistochemistry (Paraffin)	1:100
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain® Antibody Diluent #8112
Immunofluorescence (IF-IC)	1:25
Flow Cytometry	1:25

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

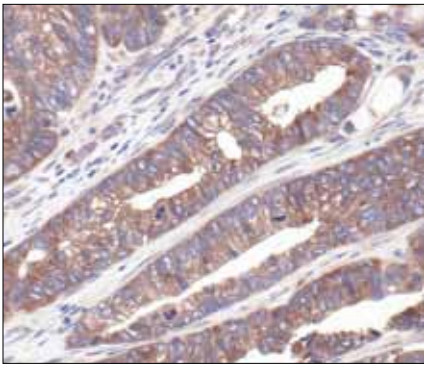
**Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.**

**Background References:**

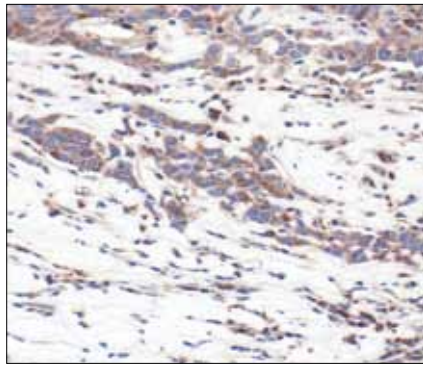
- (1) Dufner, A. and Thomas, G. (1999) *Exp. Cell Res.* 253, 100–109.
- (2) Peterson, R.T. and Schreiber, S.L. (1998) *Curr. Biol.* 8, R248–R250.
- (3) Jefferies, H.B. et al. (1997) *EMBO J.* 16, 3693–3704.
- (4) Ferrari, S. et al. (1991) *J. Biol. Chem.* 266, 22770–22775.
- (5) Flotow, H. and Thomas,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

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

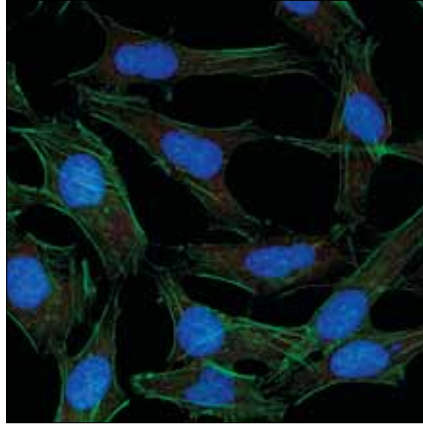
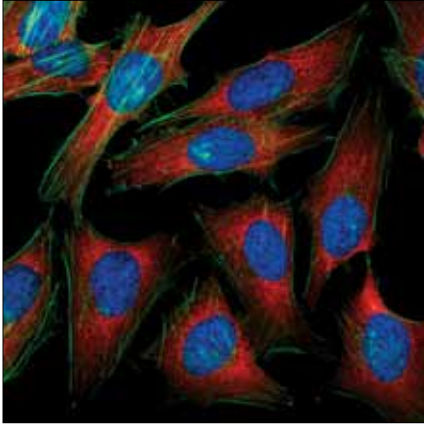
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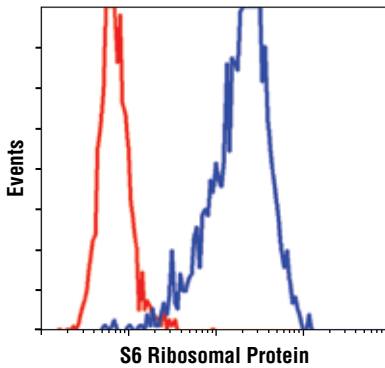
Immunohistochemical analysis of paraffin-embedded human colon carcinoma, using S6 Ribosomal Protein (54D2) Mouse mAb.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma, showing cytoplasmic localization, using S6 Ribosomal Protein (54D2) Mouse mAb.



Confocal immunofluorescent images of HeLa cells labeled with S6 Ribosomal Protein (54D2) Mouse mAb (red, left) compared to an isotype control (right). Actin filaments have been labeled with fluorescein phalloidin. Blue pseudocolor = DRAQ5<sup>®</sup> #4084 (fluorescent DNA dye).



Flow cytometric analysis of NIH/3T3 cells, using S6 Ribosomal Protein (54D2) Mouse mAb (blue) compared to a nonspecific negative control antibody (red).