

S6 Ribosomal Protein (54D2) Mouse mAb (Alexa Fluor® 488 Conjugate)



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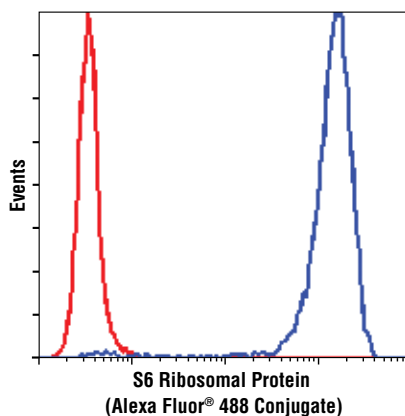
Applications	Species Cross-Reactivity*	Isotype
F, IF-IC, IF-F Endogenous	H, M, R, Dm	Mouse IgG1

Description: This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 488 fluorescent dye and tested in-house for direct flow cytometry analysis in human cells. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated S6 Ribosomal Protein (54D2) Mouse mAb #2317.

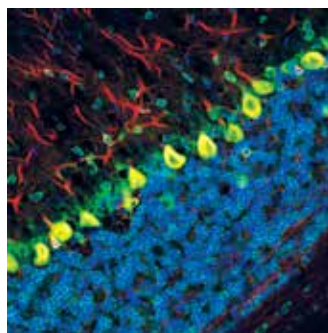
Background: One way that growth factors and mitogens effectively promote sustained cell growth and proliferation is by upregulating mRNA translation (1,2). Growth factors and mitogens induce the activation of p70 S6 kinase and the subsequent phosphorylation of the S6 ribosomal protein. Phosphorylation 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 (Alexa Fluor® 488 Conjugate) detects endogenous levels of total S6 ribosomal protein independent of phosphorylation.

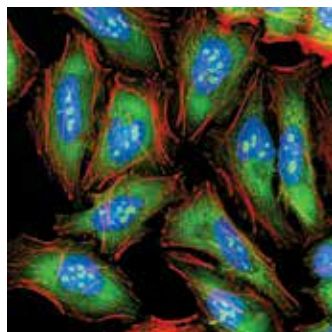
Source/Purification: Monoclonal antibody is produced by immunizing animals with a recombinant fusion protein corresponding to full-length human S6 ribosomal protein.



Flow cytometric analysis of Jurkat cells, using S6 Ribosomal Protein (54D2) Mouse mAb (Alexa Fluor® 488 Conjugate) (blue) compared to Mouse (MOPC-21) mAb IgG1 Isotype Control (Alexa Fluor® 488 Conjugate) #4878 (red).



Confocal immunofluorescent analysis of rat brain using S6 Ribosomal Protein (54D2) (Alexa Fluor® 488) Mouse mAb (green) and β3-Tubulin (D71G9) XP® Rabbit mAb #5568 (red). Blue pseudocolor = DRAQ5® (fluorescent DNA dye).



Confocal immunofluorescent analysis of HeLa cells using S6 Ribosomal Protein (54D2) Mouse mAb (Alexa Fluor® 488 Conjugate) (green). Actin filaments were labeled with DyLight™ 554 Phalloidin #13054 (red). Blue pseudocolor = DRAQ5® (fluorescent DNA dye).

Entrez-Gene ID #6194
UniProt ID #P62753

Storage: Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2mg/ml BSA. Store at 4°C. Protect from light. Do not freeze.

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

Recommended Antibody Dilutions:

Immunofluorescence (IF-IC)	1:400
Immunofluorescence (IF-F)	1:400
Flow Cytometry	1:50

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.

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, 3074-8.

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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.