Revision 1

Store at +4C

#6989

S6 Ribosomal Protein (54D2) Mouse mAb (Alexa Fluor® 555 Conjugate)

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
IF-IC	H M R Mk Dm	Endogenous	Mouse IgG1	#P62753	6194

Product Usage Information

Application	Dilution
Immunofluorescence (Immunocytochemistry)	1:50

Storage

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

Specificity/Sensitivity

S6 Ribosomal Protein (54D2) Mouse mAb (Alexa Fluor® 555 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.

Description

This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 555 fluorescent dye and tested in-house for direct immunofluorescent 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 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 S6 protein (4,5).

Background References

1. Dufner, A. and Thomas, G. (1999) *Exp Cell Res* 253, 100-9.
2. Peterson, R.T. and Schreiber, S.L. (1998) *Curr Biol* 8, R248-50.
3. Jefferies, H.B. et al. (1997) *EMBO J* 16, 3693-704.
4. Ferrari, S. et al. (1991) *J Biol Chem* 266, 22770-5.
5. Flotow, H. and Thomas, G. (1992) *J Biol Chem* 267, 3074-8.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Applications Key

IF-IC: Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey **Dm:** D. melanogaster

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Limited Uses

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