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S6 Ribosomal Protein (5G10) Rabbit mAb

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

Applications: W, W-S, IHC-P, IF-F, IF-IC	Reactivity: H M R Mk	Sensitivity: Endogenous	MW (kDa): 32	Source/Isotype: Rabbit IgG	UniProt ID: #P62753	Entrez-Gene Id: 6194
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Product Usage Information

Application

Western Blotting
Simple Western™
Immunohistochemistry (Paraffin)
Immunofluorescence (Frozen)
Immunofluorescence (Immunocytochemistry)

Dilution

1:1000
1:10 - 1:50
1:50 - 1:200
1:100 - 1:400
1:100 - 1:400

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.

For a carrier free (BSA and azide free) version of this product see product #50570.

Specificity/Sensitivity

S6 Ribosomal Protein (5G10) Rabbit Monoclonal Antibody detects endogenous levels of total S6 ribosomal protein independent of phosphorylation.

Species predicted to react based on 100% sequence homology

Pig

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues of human S6 ribosomal protein.

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).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **W-S:** Simple Western™ **IHC-P:** Immunohistochemistry (Paraffin) **IF-F:** Immunofluorescence (Frozen) **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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