

Anti-Phospho-Ser²⁴⁴ Ribosomal Protein S6 Antibody



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Catalog #: p1860-244

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Host	Applications	Species Tested	Species Reactivity*	Molecular Reference
Rabbit	WB 1:500	H, M	Ch, GP, NHP, R, X, Z	~28 kDa

Product Description: Affinity purified rabbit polyclonal antibody.

Biological Significance: Ribosomal protein S6 (rpS6) is a critical component of the 40 S ribosomal subunit that mediates translation initiation at the 5'-m⁷GpppG cap of mRNA. The rpS6 protein is both cytoplasmic and nuclear localized (Chen and Dittmer 2011). In response to mitogenic stimuli, rpS6 undergoes ordered C-terminal phosphorylation by p70 S6 kinases and p90 ribosomal S6 kinases on four Ser residues (Ser-235, Ser-236, Ser-240, and Ser-244) whose modification potentiates rpS6 cap binding activity (Hutchinson et al., 2011). Additionally, rpS6 phosphorylation and function are highly regulated and have been implicated in the regulation of translational initiation and protein synthesis in response to extracellular stimuli such as TRAIL and gamma interferon (IFN-γ), as well as upon activation of the phosphatidylinositol 3-kinase (PI3K)-Akt-mTOR pathway (Chen and Dittmer 2011).

Antigen: Phosphopeptide corresponding to amino acid residues surrounding the phospho-Ser²⁴⁴ of mouse rpS6.

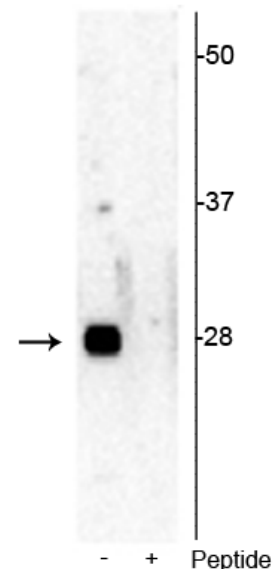
Antibody Specificity: Specific for endogenous levels of the ~28 kDa rpS6 protein phosphorylated at Ser²⁴⁴. Immunolabeling is blocked by preadsorption with the phosphopeptide used as antigen, but not by the corresponding non-phosphopeptide.

Purification Method: Prepared from pooled rabbit serum by affinity purification via sequential chromatography on phospho and non-phosphopeptide affinity columns.

Quality Control Tests: Western blots performed on each lot.

Packaging: 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg BSA per ml and 50% glycerol.

Storage and Stability: Shipped on blue ice. Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol. Stable for at least 1 year at -20°C.



Western blot of Jurkat cell lysate showing specific immunolabeling of the ~28 kDa rpS6 phosphorylated at Ser²⁴⁴ in the first lane (-). Phosphospecificity is shown in the second lane (+) where immunolabeling is blocked by preadsorption of the phosphopeptide used as antigen, but not by the corresponding non-phosphopeptide (not shown).

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Application Key: WB = Western Blot IF = Immunofluorescence IHC = Immunohistochemistry IP = Immunoprecipitation

Species Reactivity Key: All-All Species A-Avian Amp-Amphibian Ar-Arabidopsis B-Bovine C-Canine Ch-Chicken D-Drosophila GP-Guinea Pig H-Human Ha-Hamster M-Mouse NHP-Non-human primate P-Pig R-Rat S-Sheep X-Xenopus Z-Zebrafish

*Species assumed based on 100% homology with sequence used as antigen

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General References:

Chen W and Dittmer D (2011) Ribosomal protein S6 (RPS6) interacts with the latency-associated nuclear antigen (LANA) of Kaposi sarcoma associated herpesvirus (KSHV). *J. Virol.* 18 9495-9505

Fumagalli S. and Thomas, G. (2000). S6 phosphorylation and signal transduction. In *Translational control of gene expression* (eds. N. Sonenberg et al.), pp. 695-717. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY.

Hutchinson JA, Shanware NP, Chang H, Tibbetts RS. (2011) Regulation of ribosomal protein S6 phosphorylation by casein kinase 1 and protein phosphatase 1. *J Biol Chem* 10:8688-96

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