

RPL5 (D5Q5X) Rabbit mAb

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Applications: W	Reactivity: H Mk	Sensitivity: Endogenous	MW (kDa): 34	Source/Isotype: Rabbit IgG	UniProt ID: #P46777	Entrez-Gene Id: 6125
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Product Usage Information**Application**

Western Blotting

Dilution

1:1000

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.

Specificity/Sensitivity

RPL5 (D5Q5X) Rabbit mAb recognizes endogenous levels of total RPL5 protein.

Species predicted to react based on 100% sequence homology

Bovine, Pig, Horse

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gln122 of human RPL5 protein.

Background

Ribosomal protein L5 (RPL5) is one of several proteins that comprise the 60S ribosomal subunit. RPL5 binds 5S rRNA and the nucleolar RPL11 protein to form the 5S ribonucleoprotein particle (RNP) that is incorporated into the large 60S ribosomal subunit (1). An RP-MDM2-p53 protein complex that contains ribosomal proteins RPL5, RPL11, and RPL23 acts as a nucleolar stress sensor that binds and inhibits MDM2 ubiquitin ligase activity and enhances p53-mediated transcriptional activity (2,3). RPL5 cooperates with RPL11 to influence ribosome biogenesis through regulating expression of the transcription factor c-Myc, which acts as the master regulator of ribosome biogenesis (4). Mutations in the corresponding *RPL5* gene are associated with Diamond-Blackfan anemia, which is a form of red blood cell aplasia, and some cases of pediatric T-cell acute lymphoblastic leukemia (5,6).

Background References

1. Zhang, J. et al. (2007) *Genes Dev* 21, 2580-92.
2. Horn, H.F. and Vousden, K.H. (2008) *Oncogene* 27, 5774-84.
3. Dai, M.S. and Lu, H. (2004) *J Biol Chem* 279, 44475-82.
4. Liao, J.M. et al. (2013) *Oncogene*, [Epub ahead of print].
5. Avondo, F. et al. (2009) *BMC Genomics* 10, 442.
6. De Keersmaecker, K. et al. (2013) *Nat Genet* 45, 186-90.

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

Cross-Reactivity Key

H: Human **Mk:** Monkey

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