

Ribosomal Protein L12 (C-16): sc-82357

BACKGROUND

Ribosomes, the organelles that catalyze protein synthesis, are composed of a small subunit (40S) and a large subunit (60S) that consist of over 80 distinct Ribosomal Proteins. Mammalian Ribosomal Proteins are encoded by multigene families that contain processed pseudogenes and one functional intron-containing gene within their coding regions. Ribosomal Protein L12, also known as RPL12, is a 165 amino acid protein that localizes to the cytoplasm and exists as a component of the 60S subunit through which it binds directly to 26S rRNA. Multiple isoforms of Ribosomal Protein L12 exist due to alternative splicing events. Like most Ribosomal Proteins, Ribosomal Protein L12 exists as multiple processed pseudogenes that are scattered throughout the genome.

REFERENCES

1. Chu, W., et al. 1993. The primary structure of human Ribosomal Protein L12. *Nucleic Acids Res.* 21: 749.
2. Wool, I.G., et al. 1995. Structure and evolution of mammalian ribosomal proteins. *Biochem. Cell Biol.* 73: 933-947.
3. Uchiumi, T. and Kominami, R. 1997. Binding of mammalian ribosomal protein complex P0.P1.P2 and protein L12 to the GTPase-associated domain of 28S ribosomal RNA and effect on the accessibility to anti-28S RNA autoantibody. *J. Biol. Chem.* 272: 3302-3308.
4. Kenmochi, N., et al. 1998. A map of 75 human ribosomal protein genes. *Genome Res.* 8: 509-523.
5. Plafker, S.M. and Macara, I.G. 2002. Ribosomal Protein L12 uses a distinct nuclear import pathway mediated by importin 11. *Mol. Cell. Biol.* 22: 1266-1275.
6. Kapp, L.D. and Lorsch, J.R. 2004. The molecular mechanics of eukaryotic translation. *Annu. Rev. Biochem.* 73: 657-704.
7. Cuccurese, M., et al. 2005. Alternative splicing and nonsense-mediated mRNA decay regulate mammalian ribosomal gene expression. *Nucleic Acids Res.* 33: 5965-5977.
8. Online Mendelian Inheritance in Man, OMIM[™]. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 180475. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: RPL12 (human) mapping to 9q33.3; Rpl12-ps1 (mouse) mapping to 1 B.

SOURCE

Ribosomal Protein L12 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Ribosomal Protein L12 of human origin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-82357 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Ribosomal Protein L12 (C-16) is recommended for detection of Ribosomal Protein L12 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Ribosomal Protein L12 (C-16) is also recommended for detection of Ribosomal Protein L12 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Ribosomal Protein L12 siRNA (h): sc-76430, Ribosomal Protein L12 siRNA (m): sc-76431, Ribosomal Protein L12 shRNA Plasmid (h): sc-76430-SH, Ribosomal Protein L12 shRNA Plasmid (m): sc-76431-SH, Ribosomal Protein L12 shRNA (h) Lentiviral Particles: sc-76430-V and Ribosomal Protein L12 shRNA (m) Lentiviral Particles: sc-76431-V.

Molecular Weight of Ribosomal Protein L12: 18 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.