

Ribosomal Protein S19 (WW-4): sc-100836

BACKGROUND

Ribosomal subunits are synthesized in the nucleus and mature 40S and 60S subunits are exported stoichiometrically into the cytoplasm. Together these subunits are composed of four RNA species and approximately 80 structurally distinct proteins. Ribosomal Proteins have the ability to pass through the nuclear envelope in the native state, making them the largest of the structures accommodated by the nuclear pore complexes. The nuclear export of ribosomal subunits is a unidirectional, saturable and energy-dependent process. Ribosomal Protein S19 (RPS19) is a 145 amino acids protein expressed in various human adult tissues, including bone marrow, peripheral blood, spleen, liver and nonhematopoietic tissues. RPS19 expression decreases during terminal erythroid differentiation; a deficiency of RPS19 blocks proliferation of immature erythroid progenitor cells altogether. Mutations in the RPS19 gene are linked with Diamond-Blackfan anemia (DBA), a congenital, hypoplastic, red cell aplasia that occasionally presents with physical anomalies.

CHROMOSOMAL LOCATION

Genetic locus: RPS19 (human) mapping to 19q13.2; Rps19 (mouse) mapping to 7 A3.

SOURCE

Ribosomal Protein S19 (WW-4) is a mouse monoclonal antibody raised against a recombinant protein mapping within amino acids 1-145 of Ribosomal Protein S19 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} kappa light chain in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Ribosomal Protein S19 (WW-4) is recommended for detection of Ribosomal Protein S19 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for Ribosomal Protein S19 siRNA (h): sc-61474, Ribosomal Protein S19 siRNA (m): sc-61475, Ribosomal Protein S19 shRNA Plasmid (h): sc-61474-SH, Ribosomal Protein S19 shRNA Plasmid (m): sc-61475-SH, Ribosomal Protein S19 shRNA (h) Lentiviral Particles: sc-61474-V and Ribosomal Protein S19 shRNA (m) Lentiviral Particles: sc-61475-V.

Molecular Weight of Ribosomal Protein S19: 16 kDa.

Positive Controls: Ribosomal Protein S19 (h2): 293T Lysate: sc-174526, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

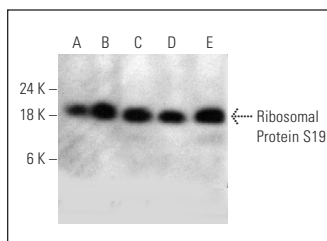
STORAGE

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

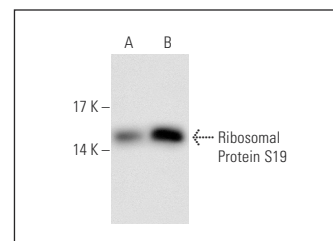
RESEARCH USE

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

DATA



Ribosomal Protein S19 (WW-4): sc-100836. Western blot analysis of Ribosomal Protein S19 expression in HeLa (A), Jurkat (B), Caco-2 (C), NIH/3T3 (D) and Neuro-2A (E) whole cell lysates.



Ribosomal Protein S19 (WW-4): sc-100836. Western blot analysis of Ribosomal Protein S19 expression in non-transfected: sc-117752 (A) and human Ribosomal Protein S19 transfected: sc-174526 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

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- Moniz, H., et al. 2012. Primary hematopoietic cells from DBA patients with mutations in RPL11 and RPS19 genes exhibit distinct erythroid phenotype *in vitro*. *Cell Death Dis.* 3: e356.
- Zhou, X., et al. 2013. Ribosomal Protein S14 unties the MDM2-p53 loop upon ribosomal stress. *Oncogene* 32: 388-396.
- Heijnen, H.F., et al. 2014. Ribosomal protein mutations induce autophagy through S6 kinase inhibition of the Insulin pathway. *PLoS Genet.* 10: e1004371.
- Gotsbacher, M.P., et al. 2017. Daptomycin, a last-resort antibiotic, binds Ribosomal Protein S19 in humans. *Proteome Sci.* 15: 16.
- Wu, Z., et al. 2018. Ubiquitination of ABCE1 by NOT4 in response to mitochondrial damage links co-translational quality control to PINK1-directed mitophagy. *Cell Metab.* 28: 130-144.e7.
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- Liang, L., et al. 2019. Deubiquitylase USP7 regulates human terminal erythroid differentiation by stabilizing GATA1. *Haematologica* 104: 2178-2187.
- Jiang, X., et al. 2021. Control of ribosomal protein synthesis by the microprocessor complex. *Sci. Signal.* 14: eabd2639.

PROTOCOLS

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