

Ribosomal Protein S17 (40-K): sc-100835

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 S17, also known as RPS17, RPS17L1 or RPS17L2, is a 135 amino acid protein that is a component of the 40S subunit. Localized to the cytoplasm and expressed ubiquitously, Ribosomal Protein S17 belongs to the S17E family of ribosomal proteins and functions in protein synthesis. Mutations in the gene encoding Ribosomal Protein S17 are associated with Diamond-Blackfan anemia (DBA), a rare congenital disorder characterized by defective differentiation of pro-erythroblasts. Like most ribosomal proteins, Ribosomal Protein S17 exists as multiple processed pseudogenes that are scattered throughout the genome.

REFERENCES

- Chen, I.T. and Roufa, D.J. 1988. The transcriptionally active human Ribosomal Protein S17 gene. *Gene* 70: 107-116.
- Maki, C., et al. 1989. The *Drosophila melanogaster* RPS17 gene encoding Ribosomal Protein S17. *Gene* 79: 289-298.
- Thompson, M.D., et al. 1992. Characterization of RPS17, RP19 and RPL15: three nucleus-encoded plastid ribosomal protein genes. *Plant Mol. Biol.* 18: 931-944.
- Schultes, N.P., et al. 2000. Maize high chlorophyll fluorescent 60 mutation is caused by an Ac disruption of the gene encoding the chloroplast ribosomal small subunit protein 17. *Plant J.* 21: 317-327.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 180472. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: RPS17 (human) mapping to 15q25.2; Rps17 (mouse) mapping to 7 D3.

SOURCE

Ribosomal Protein S17 (40-K) is a mouse monoclonal antibody raised against recombinant Ribosomal Protein S17 of human origin.

PRODUCT

Each vial contains 50 µg IgG₁ kappa light chain in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

PROTOCOLS

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

APPLICATIONS

Ribosomal Protein S17 (40-K) is recommended for detection of Ribosomal Protein S17 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Ribosomal Protein S17 siRNA (h): sc-90116, Ribosomal Protein S17 siRNA (m): sc-152938, Ribosomal Protein S17 shRNA Plasmid (h): sc-90116-SH, Ribosomal Protein S17 shRNA Plasmid (m): sc-152938-SH, Ribosomal Protein S17 shRNA (h) Lentiviral Particles: sc-90116-V and Ribosomal Protein S17 shRNA (m) Lentiviral Particles: sc-152938-V.

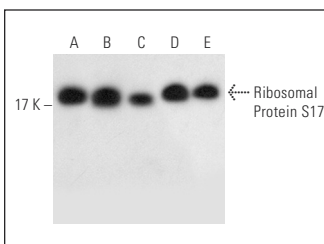
Molecular Weight of Ribosomal Protein S17: 16 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HL-60 whole cell lysate: sc-2209 or U-937 cell lysate: sc-2239.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



Ribosomal Protein S17 (40-K): sc-100835. Western blot analysis of Ribosomal Protein S17 expression in HeLa (A), HL-60 (B), MCF7 (C), U-937 (D) and HEL 92.1.7 (E) whole cell lysates.

SELECT PRODUCT CITATIONS

- Kenney, S.P. and Meng, X.J. 2015. Identification and fine mapping of nuclear and nucleolar localization signals within the human ribosomal protein S17. *PLoS ONE* 10: e0124396.
- Papagiannopoulos, C.I., et al. 2022. Invariable ribosome stoichiometry during murine erythroid differentiation: implications for understanding ribosomopathies. *Front. Mol. Biosci.* 9: 805541.

RESEARCH USE

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