

# Ribosomal Protein S10 (A-10): sc-515655

## 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 multi-gene families that contain processed pseudogenes and one functional intron-containing gene within their coding regions. Ribosomal Protein S10 (RPS10) is a 165 amino acid component of the small ribosomal 40S subunit. While generally found in the cytoplasm, RPS10 can localize to the granular component (GC) region of the nucleolus. For this to occur, methylation by PRMT5 is required as well as an interaction with NPS1. Defects in RPS10 are the cause of Diamond-Blackfan anemia type 9 (DBA9). It is a form of Diamond-Blackfan anemia, a congenital non-regenerative hypoplastic anemia that usually presents early in infancy. Diamond-Blackfan anemia is characterized by a moderate to severe macrocytic anemia, erythroblastopenia, and an increased risk of malignancy.

## REFERENCES

1. Wang, B., et al. 2008. Evaluation of the low-specificity protease elastase for large-scale phosphoproteome analysis. *Anal. Chem.* 80: 9526-9533.
2. Daub, H., et al. 2008. Kinase-selective enrichment enables quantitative phosphoproteomics of the kinome across the cell cycle. *Mol. Cell* 31: 438-448.

## CHROMOSOMAL LOCATION

Genetic locus: RPS10 (human) mapping to 6p21.31; Rps10 (mouse) mapping to 17 A3.3.

## SOURCE

Ribosomal Protein S10 (A-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 105-124 within an internal region of Ribosomal Protein S10 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Ribosomal Protein S10 (A-10) is available conjugated to agarose (sc-515655 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515655 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515655 PE), fluorescein (sc-515655 FITC), Alexa Fluor® 488 (sc-515655 AF488), Alexa Fluor® 546 (sc-515655 AF546), Alexa Fluor® 594 (sc-515655 AF594) or Alexa Fluor® 647 (sc-515655 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515655 AF680) or Alexa Fluor® 790 (sc-515655 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515655 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## RESEARCH USE

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

## APPLICATIONS

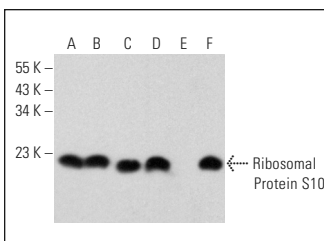
Ribosomal Protein S10 (A-10) is recommended for detection of Ribosomal Protein S10 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting 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 S10 siRNA (h): sc-106508, Ribosomal Protein S10 siRNA (m): sc-152931, Ribosomal Protein S10 shRNA Plasmid (h): sc-106508-SH, Ribosomal Protein S10 shRNA Plasmid (m): sc-152931-SH, Ribosomal Protein S10 shRNA (h) Lentiviral Particles: sc-106508-V and Ribosomal Protein S10 shRNA (m) Lentiviral Particles: sc-152931-V.

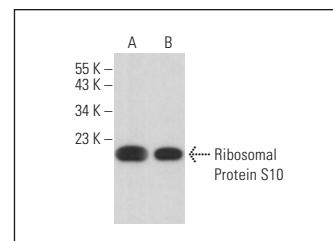
Molecular Weight of Ribosomal Protein S10: 18 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

## DATA



Ribosomal Protein S10 (A-10): sc-515655. Western blot analysis of Ribosomal Protein S10 expression in BJAB (A), K-562 (B), HeLa (C), Raji (D), RAW 264.7 (E) and Jurkat (F) whole cell lysates. Note lack of reactivity with mouse Ribosomal Protein S10 in lane E.



Ribosomal Protein S10 (A-10): sc-515655. Western blot analysis of Ribosomal Protein S10 expression in NAMALWA (A) and WEHI-231 (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Park, E.J., et al. 2021. Whole cigarette smoke condensates induce accumulation of amyloid β precursor protein with oxidative stress in murine astrocytes. *Toxics* 9: 150.
2. Qiang, M., et al. 2021. Cockayne syndrome-associated CSA and CSB mutations impair ribosome biogenesis, ribosomal protein stability, and global protein folding. *Cells* 10: 1616.
3. Papagiannopoulos, C.I., et al. 2022. Invariable ribosome stoichiometry during murine erythroid differentiation: implications for understanding ribosomopathies. *Front. Mol. Biosci.* 9: 805541.

## 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](http://www.scbt.com) for detailed protocols and support products.