

Ribosomal Protein S23 (SJ-K2): sc-100837

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 S23, also known as RPS23, is a 143 amino acid component of the 40S subunit. Localized to the cytoplasm, Ribosomal Protein S23 belongs to the S12P family of Ribosomal proteins and functions in protein synthesis. Like most Ribosomal proteins, Ribosomal Protein S23 exists as multiple processed pseudogenes that are scattered throughout the genome. Human Ribosomal Protein S23 shares significant amino acid similarity with its yeast counterpart, suggesting a conserved role between species.

REFERENCES

- Hori, N., et al. 1993. A cDNA sequence of human ribosomal protein, homologue of yeast S28. *Nucleic Acids Res.* 21: 4394.
- Kitaoka, Y., et al. 1994. The primary structure of rat Ribosomal Protein S23. *Biochem. Biophys. Res. Commun.* 202: 314-320.

CHROMOSOMAL LOCATION

Genetic locus: RPS23 (human) mapping to 5q14.2; Rps23 (mouse) mapping to 13 C3.

SOURCE

Ribosomal Protein S23 (SJ-K2) is a mouse monoclonal antibody raised against recombinant Ribosomal Protein S23 of human origin.

PRODUCT

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

APPLICATIONS

Ribosomal Protein S23 (SJ-K2) is recommended for detection of Ribosomal Protein S23 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 S23 siRNA (h): sc-91667, Ribosomal Protein S23 siRNA (m): sc-152942, Ribosomal Protein S23 shRNA Plasmid (h): sc-91667-SH, Ribosomal Protein S23 shRNA Plasmid (m): sc-152942-SH, Ribosomal Protein S23 shRNA (h) Lentiviral Particles: sc-91667-V and Ribosomal Protein S23 shRNA (m) Lentiviral Particles: sc-152942-V.

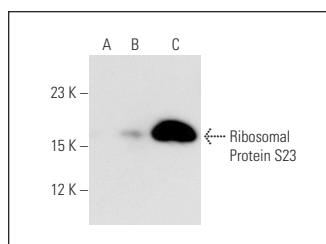
Molecular Weight of Ribosomal Protein S23: 16 kDa.

Positive Controls: Ribosomal Protein S23 (m): 293T Lysate: sc-123184 or HeLa whole cell lysate: sc-2200.

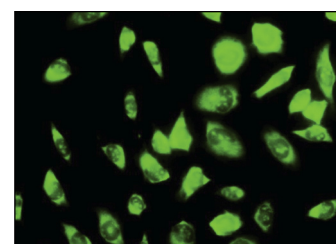
RECOMMENDED SUPPORT REAGENTS

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Ribosomal Protein S23 (SJ-K2): sc-100837. Western blot analysis of Ribosomal Protein S23 expression in non-transfected 293T: sc-117752 (A), mouse Ribosomal Protein S23 transfected 293T: sc-123184 (B) and HeLa (C) whole cell lysates.



Ribosomal Protein S23 (SJ-K2): sc-100837. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Wang, Y., et al. 2014. p53 is positively regulated by miR-542-3p. *Cancer Res.* 74: 3218-3127.
- Lyons, S.M., et al. 2016. YB-1 regulates tiRNA-induced stress granule formation but not translational repression. *Nucleic Acids Res.* 44: 6949-6960.
- Clasen, S.J., et al. 2017. Prolyl dihydroxylation of unassembled uS12/RPS23 regulates fungal hypoxic adaptation. *Elife* 6: e28563.
- 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.
- Fuentes, P., et al. 2021. The 40S-LARP1 complex reprograms the cellular translome upon mTOR inhibition to preserve the protein synthetic capacity. *Sci. Adv.* 7: eabg9275.
- 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.

RESEARCH USE

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