Ribosomal Protein S3 (E-6): sc-376098

**BACKGROUND**

Ribosomal subunits are synthesized in the nucleus, and mature 40S and 60S subunits are exported stoichiometrically into the cytoplasm. Both 40S and 60S subunits are composed of four RNA species and approximately 80 structurally distinct proteins. Mitochondrial ribosomes consist of a small 28S subunit and a large 39S subunit. 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 S3 is a member of the 40S subunit and plays a role in translation and ribosome maturation. Specifically, Ribosomal Protein S3 mediates the formation of the mRNA binding site 3' of the codon in the decoding site. In addition, Ribosomal Protein S3 is involved in DNA damage recognition as shown by its affinity for abasic sites and 7,8-dihydro-8-oxoguanine residues and its interaction with human base excision repair (BER) proteins OGG1 and Ref-1.

**REFERENCES**

3. Hegde, V., et al. 2006. The high binding affinity of human Ribosomal Protein S3 to 7,8-dihydro-8-oxoguanine is abrogated by a single amino acid change. DNA Repair 5: 810-815.

**CHROMOSOMAL LOCATION**

Genetic locus: RPS3 (human) mapping to 11q13.4; Rps3 (mouse) mapping to 7 E2.

**SOURCE**

Ribosomal Protein S3 (E-6) is a mouse monoclonal antibody raised against amino acids 1-243 representing full length Ribosomal Protein S3 of human origin.

**RESEARCH USE**

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

**PRODUCT**

Each vial contains 200 µg IgG2b in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

**APPLICATIONS**

Ribosomal Protein S3 (E-6) is recommended for detection of Ribosomal Protein S3 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), immunohistochemistry (including paraffin-embedded sections) (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 S3 siRNA (h): sc-96950, Ribosomal Protein S3 siRNA (m): sc-152950, Ribosomal Protein S3 shRNA Plasmid (h): sc-96950-SH, Ribosomal Protein S3 shRNA Plasmid (m): sc-152950-SH, Ribosomal Protein S3 shRNA (h) Lentiviral Particles: sc-96950-V and Ribosomal Protein S3 shRNA (m) Lentiviral Particles: sc-152950-V.

Molecular Weight of Ribosomal Protein S3: 33 kDa.

Positive Controls: Ramos cell lysate: sc-2216, NAMALWA cell lysate: sc-2234 or Raji whole cell lysate: sc-364236.

**DATA**

![Ribosomal Protein S3 Western Blot](image1.png)

Ribosomal Protein S3 (E-6): sc-376098. Western blot analysis of Ribosomal Protein S3 expression in Raji (A), Ramos (B), NAMALWA (C), WEHI-231 (D), NIH/3T3 (E) and 3611-RF (F) whole cell lysates.

![Ribosomal Protein S3 Immunofluorescence](image2.png)

Ribosomal Protein S3 (E-6): sc-376098. Immunoperoxidase staining of formalin fixed, paraffin-embedded human nasopharynx tissue showing nuclear and cytoplasmic staining of respiratory epithelial cells and inflammatory cells (A). Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear localization (B).

**SELECT PRODUCT CITATIONS**


**STORAGE**

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