

# MRP-S14 (P-17): sc-67689

## BACKGROUND

MRP-S14 (mitochondrial 28S ribosomal protein S14, S14mt) is a 128 amino acid protein encoded by the human gene MRPS14. MRP-S14 is a component of the mitochondrial ribosome small subunit (28S) which comprises a 12S rRNA and about 30 distinct proteins. The human mitochondrial ribosome has 29 distinct proteins in the small subunit. 14 of this group of proteins are homologs of the *Escherichia coli* 30S ribosomal proteins S2, S5, S6, S7, S9, S10, S11, S12, S14, S15, S16, S17, S18 and S21. All of these proteins have homologs in *Drosophila melanogaster*, *Caenorhabditis elegans* and *Saccharomyces cerevisiae* mitochondrial ribosomes.

## REFERENCES

1. Spirin, A.S., et al. 1997. Topography of ribosomal proteins: reconsideration of protein map of small ribosomal subunit. *Biokhimiia* 61: 1928-1930.
2. Koc, E.C., et al. 2000. A proteomics approach to the identification of mammalian mitochondrial small subunit ribosomal proteins. *J. Biol. Chem.* 275: 32585-32591.
3. Figueroa, P., et al. 2000. The nuclear-encoded SDH2-RPS14 precursor is proteolytically processed between SDH2 and RPS14 to generate maize mitochondrial RPS14. *Biochem. Biophys. Res. Commun.* 271: 380-385.
4. Cavdar Koc, E., et al. 2001. The small subunit of the mammalian mitochondrial ribosome. Identification of the full complement of ribosomal proteins present. *J. Biol. Chem.* 276: 19363-19374.
5. Kenmochi, N., et al. 2001. The human mitochondrial ribosomal protein genes: mapping of 54 genes to the chromosomes and implications for human disorders. *Genomics* 77: 65-70.

## CHROMOSOMAL LOCATION

Genetic locus: MRPS14 (human) mapping to 1q25.1; Mrps14 (mouse) mapping to 1 H2.1.

## SOURCE

MRP-S14 (P-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of MRP-S14 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-67689 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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) or our catalog for detailed protocols and support products.

## APPLICATIONS

MRP-S14 (P-17) is recommended for detection of mitochondrial 28S ribosomal protein S14 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

MRP-S14 (P-17) is also recommended for detection of mitochondrial 28S ribosomal protein S14 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for MRP-S14 siRNA (h): sc-62637, MRP-S14 siRNA (m): sc-62638, MRP-S14 shRNA Plasmid (h): sc-62637-SH, MRP-S14 shRNA Plasmid (m): sc-62638-SH, MRP-S14 shRNA (h) Lentiviral Particles: sc-62637-V and MRP-S14 shRNA (m) Lentiviral Particles: sc-62638-V.

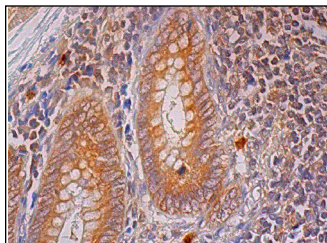
Molecular Weight of MRP-S14: 14 kDa.

Positive Controls: T98G cell lysate: sc-2294 or NIH/3T3 whole cell lysate: sc-2210.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



MRP-S14 (P-17): sc-67689. Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic staining of glandular cells and lymphoid cells.

## RESEARCH USE

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