

MRP-S27 (N-14): sc-107017

BACKGROUND

Mitochondrial ribosomes consist of a large 39S subunit and a small 28S subunit, both of which are comprised of multiple mitochondrial ribosomal proteins (MRPs) that are encoded by nuclear genes and are essential for protein synthesis within mitochondria. MRP-S27 (mitochondrial ribosomal protein S27), also known as S27mt, is a 414 amino acid component of the mitochondrial ribosome small subunit (28S) that localizes to mitochondria and contains 2 PPR (pentatricopeptide) repeats. Widely expressed, MRP-S27 is found at highest levels in skeletal muscle and heart, and is encoded by a gene located on human chromosome 5, which contains 181 million base pairs and comprises nearly 6% of the human genome. Deletion of the p arm of chromosome 5 leads to cri du chat syndrome, while deletion of the q arm of chromosome 5 altogether is common in therapy-related acute myelogenous leukemias and myelodysplastic syndrome.

CHROMOSOMAL LOCATION

Genetic locus: MRPS27 (human) mapping to 5q13.2; Mrps27 (mouse) mapping to 13 D1.

SOURCE

MRP-S27 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of MRP-S27 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-107017 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

MRP-S27 (N-14) is recommended for detection of MRP-S27 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).

MRP-S27 (N-14) is also recommended for detection of MRP-S27 in additional species, including equine and canine.

Suitable for use as control antibody for MRP-S27 siRNA (h): sc-91758, MRP-S27 siRNA (m): sc-149627, MRP-S27 shRNA Plasmid (h): sc-91758-SH, MRP-S27 shRNA Plasmid (m): sc-149627-SH, MRP-S27 shRNA (h) Lentiviral Particles: sc-91758-V and MRP-S27 shRNA (m) Lentiviral Particles: sc-149627-V.

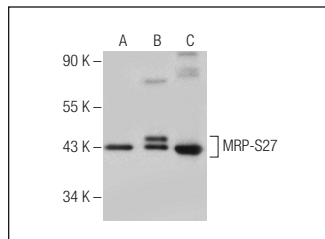
Molecular Weight of MRP-S27: 48 kDa.

Positive Controls: MRP-S27 (h3): 293T Lysate: sc-371283 or HeLa whole cell lysate: sc-2200.

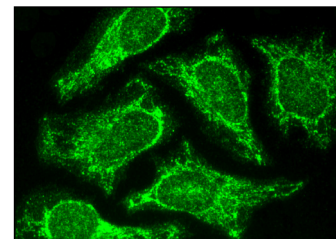
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



MRP-S27 (N-14): sc-107017. Western blot analysis of MRP-S27 expression in non-transfected 293T: sc-117752 (A), human MRP-S27 transfected 293T: sc-371283 (B) and HeLa (C) whole cell lysates.



MRP-S27 (N-14): sc-107017. Immunofluorescence staining of methanol-fixed HeLa cells showing mitochondrial localization.

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 or our catalog for detailed protocols and support products.



Try **MRP-S27 (A-10): sc-390396**, our highly recommended monoclonal alternative to MRP-S27 (N-14).