SANTA CRUZ BIOTECHNOLOGY, INC.

Ribosomal Protein S7 (44-K): sc-100834

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 multigene families that contain processed pseudogenes and one functional intron-containing gene within their coding regions. Ribosomal Protein S7, also known as RPS7, is a 194 amino acid protein that is a component of the 40S subunit. Localized to the cytoplasm, Ribosomal Protein S7 belongs to the S7E family of ribosomal proteins and functions in protein synthesis. Ribosomal Protein S7 interacts with MDM2 and is believed to negatively regulate the MDM2-mediated degradation of p53. In addition, Ribosomal Protein S7 may play a role in ribosomal stress, linking ribosome biogenesis to cell death or cell cycle arrest. Like most ribosomal proteins, Ribosomal Protein S7 exists as multiple processed pseudogenes that are scattered throughout the genome.

REFERENCES

1. Annilo, T., et al. 1995. The human Ribosomal Protein S7-encoding gene: isolation, structure and localization in 2p25. Gene 165: 297-302.
2. Kenmochi, N., et al. 1998. A map of 75 human ribosomal protein genes. Genome Res. 8: 509-523.

CHROMOSOMAL LOCATION

Genetic locus: RPS7 (human) mapping to 2p25.3; Rps7 (mouse) mapping to 12 A2.

SOURCE

Ribosomal Protein S7 (44-K) is a mouse monoclonal antibody raised against recombinant Ribosomal Protein S7 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Ribosomal Protein S7 (44-K) is recommended for detection of Ribosomal Protein S7 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), 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 S7 siRNA (h): sc-106511, Ribosomal Protein S7 siRNA (m): sc-152952, Ribosomal Protein S7 shRNA Plasmid (h): sc-106511-SH, Ribosomal Protein S7 shRNA Plasmid (m): sc-152952-SH, Ribosomal Protein S7 shRNA (h) Lentiviral Particles: sc-106511-V and Ribosomal Protein S7 shRNA (m) Lentiviral Particles: sc-152952-V.

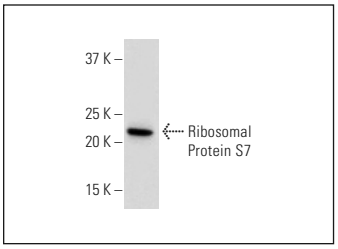
Molecular Weight of Ribosomal Protein S7: 22 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

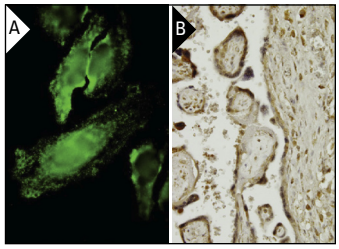
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Ribosomal Protein S7 (44-K): sc-100834. Western blot analysis of Ribosomal Protein S7 expression in HeLa whole cell lysate.



Ribosomal Protein S7 (44-K): sc-100834. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human placenta tissue showing nuclear and cytoplasmic localization (**B**).

SELECT PRODUCT CITATIONS

1. Wu, C.T., et al. 2011. Ling Zhi-8 mediates p53-dependent growth arrest of lung cancer cells proliferation via the ribosomal protein S7-MDM2-p53 pathway. Carcinogenesis 32: 1890-1896.
2. Yang, P.M., et al. 2013. Zebularine inhibits tumorigenesis and stemness of colorectal cancer via p53-dependent endoplasmic reticulum stress. Sci. Rep. 3: 3219.
3. Heijnen, H.F., et al. 2014. Ribosomal protein mutations induce autophagy through S6 kinase inhibition of the Insulin pathway. PLoS Genet. 10: e1004371.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.