SANTA CRUZ BIOTECHNOLOGY, INC.

Ribosomal Protein LP0 (1B4): sc-293260

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. Ribosomal Protein LP0, also known as RPLP0, P0, L10E or RPP0, is a 317 amino acid cytoplasmic protein that is the human ortholog of the yeast L10 ribosomal protein. One of several components of the 60S ribosomal subunit, Ribosomal Protein LP0 functions as a neutral phosphoprotein that shares high similarity with Ribosomal Protein LP1 and Ribosomal Protein LP2. Together, these proteins form a pentameric complex (comprised of LP1 and LP2 dimers and one LP0 monomer) that regulates ribosome assembly and plays a role in translation initiation. Overexpression of Ribosomal Protein LP0 is associated with liver and breast cancer, suggesting a role for Ribosomal Protein LP0 in tumorigenesis. Like other mammalian ribosomal proteins, Ribosomal Protein LP0 exists as multiple processed pseudogenes that are found throughout the genome.

CHROMOSOMAL LOCATION

Genetic locus: RPLP0 (human) mapping to 12q24.23; Rplp0 (mouse) mapping to 5 F.

SOURCE

Ribosomal Protein LP0 (1B4) is a mouse monoclonal antibody raised against amino acids 1-317 representing full length Ribosomal Protein LP0 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.

RESEARCH USE

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

APPLICATIONS

Ribosomal Protein LP0 (1B4) is recommended for detection of Ribosomal Protein LP0 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 LP0 siRNA (h): sc-106507, Ribosomal Protein LP0 siRNA (m): sc-141184, Ribosomal Protein LP0 shRNA Plasmid (h): sc-106507-SH, Ribosomal Protein LP0 shRNA Plasmid (m): sc-141184-SH, Ribosomal Protein LP0 shRNA (h) Lentiviral Particles: sc-106507-V and Ribosomal Protein LP0 shRNA (m) Lentiviral Particles: sc-141184-V.

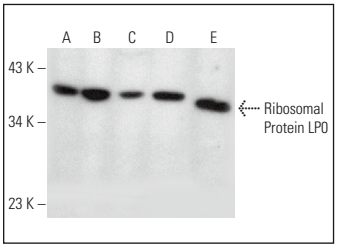
Molecular Weight of Ribosomal Protein LP0: 34 kDa.

Positive Controls: U-251-MG whole cell lysate: sc-364176, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

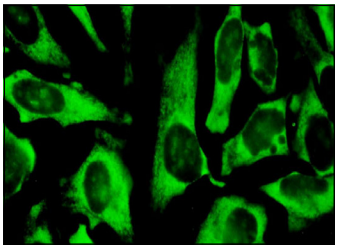
RECOMMENDED SUPPORT REAGENTS

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. 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 LP0 (1B4): sc-293260. Western blot analysis of Ribosomal Protein LP0 expression in HeLa (**A**), Jurkat (**B**), U-251-MG (**C**), NIH/3T3 (**D**) and RPE-J (**E**) whole cell lysates.



Ribosomal Protein LP0 (1B4): sc-293260. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear localization.

SELECT PRODUCT CITATIONS

1. Xie, J.J., et al. 2018. Super-enhancer-driven long non-coding RNA LINC01503, regulated by TP63, is over-expressed and oncogenic in squamous cell carcinoma. Gastroenterology 154: 2137-2151.e1.
2. Sévigny, M., et al. 2020. FUS contributes to mTOR-dependent inhibition of translation. J. Biol. Chem. 295: 18459-18473.
3. Liu, H.T., et al. 2022. lncRNA THAP7-AS1, transcriptionally activated by SP1 and post-transcriptionally stabilized by METTL3-mediated m6A modification, exerts oncogenic properties by improving CUL4B entry into the nucleus. Cell Death Differ. 29: 627-641.
4. DaDalt, A.A., et al. 2022. Src-mediated phosphorylation of the ribosome biogenesis factor hYVH1 AFFECTS its localization, promoting partitioning to the 60S ribosomal subunit. J. Biol. Chem. 298:102679.

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 for detailed protocols and support products.