

# Ribosomal Protein L23a (3E11): sc-517097

## 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 L23a, also known as RPL23A or MDA20, is a 156 amino acid protein that exists as part of the 60S ribosomal subunit and is expressed at high levels in heart, pancreas and skeletal muscle. Localized to the cytoplasm, Ribosomal Protein L23a is thought to be involved in the mediation of growth inhibition, possibly functioning as a target molecule for interferons (IFNs). Like most ribosomal proteins, Ribosomal Protein L23a exists as multiple processed pseudogenes that are scattered throughout the genome.

## REFERENCES

1. Wool, I.G., et al. 1995. Structure and evolution of mammalian ribosomal proteins. *Biochem. Cell Biol.* 73: 933-947.
2. Fan, W., et al. 1997. Cloning, sequencing, gene organization, and localization of the human ribosomal protein RPL23A gene. *Genomics* 46: 234-239.
3. Jiang, H., et al. 1997. Suppression of human ribosomal protein L23a expression during cell growth inhibition by interferon- $\beta$ . *Oncogene* 14: 473-480.
4. Jäkel, S. and Görlich, D. 1998. Importin  $\beta$ , transportin, RanBP5 and RanBP7 mediate nuclear import of ribosomal proteins in mammalian cells. *EMBO J.* 17: 4491-4502.
5. Uechi, T., et al. 2001. A complete map of the human ribosomal protein genes: assignment of 80 genes to the cytogenetic map and implications for human disorders. *Genomics* 72: 223-230.
6. Pool, M.R., et al. 2002. Distinct modes of signal recognition particle interaction with the ribosome. *Science* 297: 1345-1348.
7. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602326. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
8. Mazumder, B., et al. 2003. Regulated release of L13a from the 60S ribosomal subunit as a mechanism of transcript-specific translational control. *Cell* 115: 187-198.

## CHROMOSOMAL LOCATION

Genetic locus: RPL23A (human) mapping to 17q11.2; Rpl23a (mouse) mapping to 11 B5.

## SOURCE

Ribosomal Protein L23a (3E11) is a mouse monoclonal antibody raised against amino acids 59-156 representing partial length Ribosomal Protein L23a of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Ribosomal Protein L23a (3E11) is recommended for detection of Ribosomal Protein L23a of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

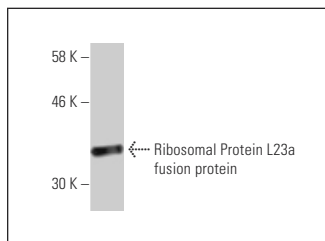
Suitable for use as control antibody for Ribosomal Protein L23a siRNA (h): sc-94170, Ribosomal Protein L23a siRNA (m): sc-152904, Ribosomal Protein L23a shRNA Plasmid (h): sc-94170-SH, Ribosomal Protein L23a shRNA Plasmid (m): sc-152904-SH, Ribosomal Protein L23a shRNA (h) Lentiviral Particles: sc-94170-V and Ribosomal Protein L23a shRNA (m) Lentiviral Particles: sc-152904-V.

Molecular Weight of Ribosomal Protein L23a: 18 kDa.

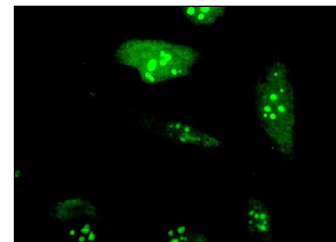
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



Ribosomal Protein L23a (3E11): sc-517097. Western blot analysis of human recombinant Ribosomal Protein L23a fusion protein.



Ribosomal Protein L23a (3E11): sc-517097. Immunofluorescence staining of methanol-fixed HeLa cells showing nucleolar localization.

## SELECT PRODUCT CITATIONS

1. Ye, C., et al. 2020. BCCIP is required for nucleolar recruitment of eIF6 and 12S pre-rRNA production during 60S ribosome biogenesis. *Nucleic Acids Res.* E-published.

## 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.