## SANTA CRUZ BIOTECHNOLOGY, INC.

# Ribosomal Protein LP0 (D-14): sc-132436



## 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 LPO, also known as RPLPO, PO, L10E or RPPO, 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 LPO 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 LPO is associated with liver and breast cancer, suggesting a role for Ribosomal Protein LPO in tumorigenesis. Like other mammalian ribosomal proteins, Ribosomal Protein LPO exists as multiple processed pseudogenes that are found throughout the genome.

## REFERENCES

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- 2. Chan, S.H., et al. 2001. Trichosanthin interacts with acidic ribosomal proteins P0 and P1 and mitotic checkpoint protein MAD2B. Eur. J. Biochem. 268: 2107-2112.
- 3. 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.
- 4. Tchórzewski, M., et al. 2003. The subcellular distribution of the human ribosomal "stalk" components: P1, P2 and P0 proteins. Int. J. Biochem. Cell Biol. 35: 203-211.
- 5. Kapp, L.D., et al. 2004. The molecular mechanics of eukaryotic translation. Annu. Rev. Biochem. 73: 657-704.
- 6. Abo, Y., et al. 2004. Baculovirus-mediated expression and isolation of human ribosomal phosphoprotein PO carrying a GST-tag in a functional state. Biochem. Biophys. Res. Commun. 322: 814-819.
- 7. Ishii, K., et al. 2006. Characteristics and clustering of human ribosomal protein genes. BMC Genomics 7: 37.
- 8. Wu, X., et al. 2007. Characterization of the full-length cDNA, chromosomal localization, and polymorphism of the porcine RPLPO gene. J. Genet. Genomics 34: 104-108.

#### CHROMOSOMAL LOCATION

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

## SOURCE

Ribosomal Protein LPO (D-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Ribosomal Protein LPO of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-132436 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## **APPLICATIONS**

Ribosomal Protein LPO (D-14) is recommended for detection of Ribosomal Protein LPO 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with Ribosomal Protein LP1 or Ribosomal Protein LP2.

Ribosomal Protein LPO (D-14) is also recommended for detection of Ribosomal Protein LPO in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Ribosomal Protein LPO siRNA (h): sc-106507, Ribosomal Protein LPO siRNA (m): sc-141184, Ribosomal Protein LPO shRNA Plasmid (h): sc-106507-SH, Ribosomal Protein LPO shRNA Plasmid (m): sc-141184-SH, Ribosomal Protein LPO shRNA (h) Lentiviral Particles: sc-106507-V and Ribosomal Protein LPO shRNA (m) Lentiviral Particles: sc-141184-V.

Molecular Weight of Ribosomal Protein LPO: 34 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

## **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<sup>™</sup> Mounting Medium: sc-24941.

#### **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.

MONOS Satisfation Guaranteed

Try Ribosomal Protein LPO (1B4): sc-293260, our highly recommended monoclonal alternative to Ribosomal Protein LPO (D-14).