SANTA CRUZ BIOTECHNOLOGY, INC.

Ribosomal Protein L14 (KQ-16): sc-100826

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 L14, also known as L14, RPL14, RL14, CTG-B33 or CAG-ISL-7, is a 213 amino acid protein that is a component of the 60S subunit. Localized to the cytoplasm, Ribosomal Protein L14 belongs to the L14e family of ribosomal proteins and functions in protein synthesis. Ribosomal Protein L14 contains a basic region-leucine zipper (bZIP)-like domain and a polymorphic polyalanine tract. The polyalanine tract is believed to participate in transcription regulation. Like most ribosomal proteins, Ribosomal Protein L14 exists as multiple processed pseudogenes that are scattered throughout the genome.

REFERENCES

1. Aoki, M., et al. 1996. Identification of trinucleotide repeat-containing genes in human pancreatic islets. Diabetes 45: 157-164.
2. De Rinaldis, E., et al. 1998. The binding sites for *Xenopus laevis* FIII/YY1 in the first exon of L1 and L14 ribosomal protein genes are dispensable for promoter expression. Eur. J. Biochem. 255: 563-569.
3. Shriver, S.P., et al. 1998. Trinucleotide repeat length variation in the human ribosomal protein L14 gene (RPL14): localization to 3p21.3 and loss of heterozygosity in lung and oral cancers. Mutat. Res. 406: 9-23.
4. Bengel, D., et al. 1998. Distribution of the B33 CTG repeat polymorphism in a subtype of schizophrenia. Eur. Arch. Psychiatry Clin. Neurosci. 248: 78-81.
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. Hasegawa, H., et al. 2002. Autoantibody against ribosomal protein L14 in patients with systemic lupus erythematosus. Clin. Exp. Rheumatol. 20: 139-144.
7. Enerly, E., et al. 2003. Silencing the *Drosophila* ribosomal protein L14 gene using targeted RNA interference causes distinct somatic anomalies. Gene 320: 41-48.
8. Tian, B., et al. 2005. Polymorphic CUG repeats in human mRNAs and their effects on gene expression. RNA Biol. 2: 149-156.

CHROMOSOMAL LOCATION

Genetic locus: RPL14 (human) mapping to 3p22.1.

SOURCE

Ribosomal Protein L14 (KQ-16) is a mouse monoclonal antibody raised against recombinant Ribosomal Protein L14 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.

APPLICATIONS

Ribosomal Protein L14 (KQ-16) is recommended for detection of Ribosomal Protein L14 of human origin by 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).

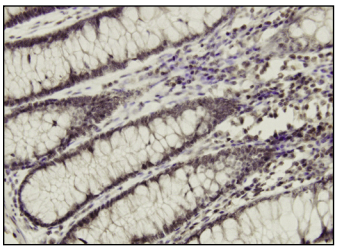
Suitable for use as control antibody for Ribosomal Protein L14 siRNA (h): sc-78387, Ribosomal Protein L14 shRNA Plasmid (h): sc-78387-SH and Ribosomal Protein L14 shRNA (h) Lentiviral Particles: sc-78387-V.

Molecular Weight of Ribosomal Protein L14: 23 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) 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. 2) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



RPL14 (KQ-16): sc-100826. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human colon tissue showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Yang, P.Y., et al. 2010. Activity-based proteome profiling of potential cellular targets of Orlistat—an FDA-approved drug with anti-tumor activities. J. Am. Chem. Soc. 132: 656-666.

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.