SANTA CRUZ BIOTECHNOLOGY, INC.

Ribosomal Protein L14 (E-14): sc-103162

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 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

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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.
9. Huang, X.P., et al. 2006. Alteration of RPL14 in squamous cell carcinomas and preneoplastic lesions of the esophagus. Gene 366: 161-168.

CHROMOSOMAL LOCATION

Genetic locus: RPL14 (human) mapping to 3p22.1; Rpl14 (mouse) mapping to 9 F4.

SOURCE

Ribosomal Protein L14 (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Ribosomal Protein L14 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-103162 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Ribosomal Protein L14 (E-14) is recommended for detection of Ribosomal Protein L14 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 other RPL family members.

Ribosomal Protein L14 (E-14) is also recommended for detection of Ribosomal Protein L14 in additional species, including canine.

Suitable for use as control antibody for Ribosomal Protein L14 siRNA (h): sc-78387, Ribosomal Protein L14 siRNA (m): sc-152896, Ribosomal Protein L14 shRNA Plasmid (h): sc-78387-SH, Ribosomal Protein L14 shRNA Plasmid (m): sc-152896-SH, Ribosomal Protein L14 shRNA (h) Lentiviral Particles: sc-78387-V and Ribosomal Protein L14 shRNA (m) Lentiviral Particles: sc-152896-V.

Molecular Weight of Ribosomal Protein L14: 23 kDa.

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™ 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.