SANTA CRUZ BIOTECHNOLOGY, INC.

Ribosomal Protein S19 (h2): 293T Lysate: sc-174526

BACKGROUND

Ribosomal subunits are synthesized in the nucleus and mature 40S and 60S subunits are exported stoichiometrically into the cytoplasm. Together these subunits are composed of four RNA species and approximately 80 structurally distinct proteins. Ribosomal proteins have the ability to pass through the nuclear envelope in the native state, making them the largest of the structures accommodated by the nuclear pore complexes. The nuclear export of ribosomal subunits is a unidirectional, saturable and energy-dependent process. Ribosomal Protein S19 (RPS19) is a 145 amino acids protein expressed in various human adult tissues, including bone marrow, peripheral blood, spleen, liver and nonhematopoietic tissues. RPS19 expression decreases during terminal erythroid differentiation; a deficiency of RPS19 blocks proliferation of immature erythroid progenitor cells altogether. Mutations in the RPS19 gene are linked with Diamond-Blackfan anemia (DBA), a congenital, hypoplastic, red cell aplasia that occasionally presents with physical anomalies.

REFERENCES

1. Subramanian, S., et al. 2001. Truncated and dispersed RPL2 and RPS19 pseudogenes are cotranscribed with neighboring downstream genes in wheat mitochondria. Curr. Genet. 39: 264-272.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603474. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Da Costa, L., et al. 2003. Nucleolar localization of RPS19 protein in normal cells and mislocalization due to mutations in the nucleolar localization signals in two Diamond-Blackfan anemia patients: potential insights into pathophysiology. Blood 101: 5039-5045.
4. Goncalves, P., et al. 2004. Gene symbol: RPS19. Disease: Diamond-Blackfan anemia. Hum. Genet. 115: 534.
5. Ebert, B.L., et al. 2005. An RNA interference model of RPS19 deficiency in Diamond-Blackfan anemia recapitulates defective hematopoiesis and rescue by dexamethasone: identification of dexamethasone-responsive genes by microarray. Blood 105: 4620-4626.
6. Fallahi, M., et al. 2005. Fate of mitochondrially located S19 Ribosomal Protein genes after transfer of a functional copy to the nucleus in cereals. Mol. Genet. Genomics 273: 76-83.

CHROMOSOMAL LOCATION

Genetic locus: RPL19 (human) mapping to 19q13.2.

PRODUCT

Ribosomal Protein S19 (h2): 293T Lysate represents a lysate of human Ribosomal Protein S19 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

Ribosomal Protein S19 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive Ribosomal Protein S19 antibodies. Recommended use: 10-20 µl per lane.

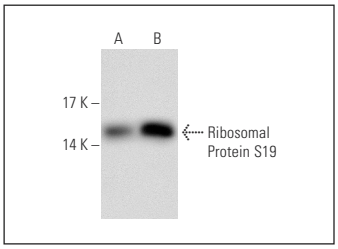
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Ribosomal Protein S19 (WW-4): sc-100836 is recommended as a positive control antibody for Western Blot analysis of enhanced human Ribosomal Protein S19 expression in Ribosomal Protein S19 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



Ribosomal Protein S19 (WW-4): sc-100836. Western blot analysis of Ribosomal Protein S19 expression in non-transfected: sc-117752 (**A**) and human Ribosomal Protein S19 transfected: sc-174526 (**B**) 293T whole cell lysates.

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.