



Ribosomal Protein S27/27L (C-12): sc-162102

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 S27 (RPS27) is an 84 amino acid protein and a component of the 40S subunit that is expressed in a number of proliferating cells and tumor tissues. Ribosomal Protein S27L also contains 84 amino acids and shares 96% similarity with Ribosomal Protein S27. Due to this homology, Ribosomal Protein S27L is believed to function as a component of the 40S subunit. Both Ribosomal Protein S27 and Ribosomal Protein 27L belong to the S27e family of ribosomal proteins but Ribosomal Protein S27 is encoded by a gene located on human chromosome 1, whereas Ribosomal Protein S27L is encoded by a gene located on human chromosome 15.

REFERENCES

1. Zhang, Q.H., et al. 2000. Cloning and functional analysis of cDNAs with open reading frames for 300 previously undefined genes expressed in CD34⁺ hematopoietic stem/progenitor cells. *Genome Res.* 10: 1546-1560.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 612055. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Bouwmeester, T., et al. 2004. A physical and functional map of the human TNF- α /NF κ B signal transduction pathway. *Nat. Cell Biol.* 6: 97-105.
4. Li, J., et al. 2007. Ribosomal protein S27-like, a p53-inducible modulator of cell fate in response to genotoxic stress. *Cancer Res.* 67: 11317-11326.
5. He, H. and Sun, Y. 2007. Ribosomal protein S27L is a direct p53 target that regulates apoptosis. *Oncogene* 26: 2707-2716.

CHROMOSOMAL LOCATION

Genetic locus: RPS27 (human) mapping to 1q21.3, RPS27L (human) mapping to 15q22.2; Rps27 (mouse) mapping to 3 F1, Rps27l (mouse) mapping to 9 C.

SOURCE

Ribosomal Protein S27/27L (C-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Ribosomal Protein S27 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-162102 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Ribosomal Protein S27/27L (C-12) is recommended for detection of Ribosomal Protein S27 and Ribosomal Protein S27L 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).

Ribosomal Protein S27/27L (C-12) is also recommended for detection of Ribosomal Protein S27 and Ribosomal Protein S27L in additional species, including equine, canine, bovine and porcine.

Molecular Weight of Ribosomal Protein S27/27L: 9 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.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.