

NOP2 (h): 293T Lysate: sc-111783

BACKGROUND

The nucleolus consists of a number of specific proteins that play a critical role in the assembly of ribosomes, as well as in the maintenance and structural integrity of the nucleolus. NOP2 (NOL1/NSUN1/Sun domain family, member 1), also known as NOL1, p120, NOP120, or Nucleolar protein 1, is an 812 amino acid nucleolar protein belonging to the methyltransferase superfamily. It is expressed in the G₁ phase of the cell cycle and peaks during the early S phase. Considered a ribosomal RNA methyltransferase, NOP2 may be involved in regulating the cell cycle and in increasing nucleolar activity that is associated with cell proliferation. NOP2 is a possible marker for proliferation in neoplastic cells and in several cancer cells. Two isoforms exist due to alternative splicing events.

REFERENCES

1. Henríquez, R., Blobel, G. and Aris, J.P. 1990. Isolation and sequencing of NOP1. A yeast gene encoding a nucleolar protein homologous to a human autoimmune antigen. *J. Biol. Chem.* 265: 2209-2215.
2. Baens, M., Chaffanet, M., Aerssens, J., Cassiman, J.J. and Marynen, P. 1994. Assignment of the gene for the human proliferating cell nucleolar protein P120 (NOL1) to chromosome 12p13 by fluorescence *in situ* hybridization and polymerase chain reaction with somatic cell hybrids. *Genomics* 21: 296-297.
3. Bocker, T., Bittinger, A., Wieland, W., Buettner, R., Fauser, G., Hofstaedter, F. and Rüschhoff, J. 1995. *In vitro* and *ex vivo* expression of nucleolar proteins B23 and p120 in benign and malignant epithelial lesions of the prostate. *Mod. Pathol.* 8: 226-231.
4. Uchiyama, B., Saijo, Y., Kumano, N., Abe, T., Fujimura, S., Ohkuda, K., Handa, M., Satoh, K. and Nukiwa, T. 1997. Expression of nucleolar protein p120 in human lung cancer: difference in histological types as a marker for proliferation. *Clin. Cancer Res.* 3: 1873-1877.
5. Sakita-Suto, S., Kanda, A., Suzuki, F., Sato, S., Takata, T. and Tatsuka, M. 2007. Aurora-B regulates RNA methyltransferase NSUN2. *Mol. Biol. Cell* 18: 1107-1117.
6. Mitrecic, D., Malnar, T. and Gajovi, S. 2008. Nucleolar protein 1 (Nol1) expression in the mouse brain. *Coll. Antropol.* 1: 123-126.
7. Pavlopoulou, A. and Kossida, S. 2009. Phylogenetic analysis of the eukaryotic RNA (cytosine-5)-methyltransferases. *Genomics* 93: 350-357.

CHROMOSOMAL LOCATION

Genetic locus: NOP2 (human) mapping to 12p13.31.

PRODUCT

NOP2 (h): 293T Lysate represents a lysate of human NOP2 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

NOP2 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive NOP2 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.

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.