

RNase T2 (K-15): sc-109017

BACKGROUND

Ribonucleases are ubiquitous enzymes involved in RNA metabolism and are classified in several families on the basis of their structural, catalytic and biological properties. RNase T2 (ribonuclease T2), also known as RNASE6PL, is a 256 amino acid secreted glycoprotein that belongs to the highly conserved family of cytoplasmic RNases. Existing as two isoforms due to alternative splicing events, RNase T2 acts as a class II tumor suppressor. Ubiquitously expressed, RNase T2 is suggested to play an important role in regulating tumorigenesis and metastatization. Mutations in the gene encoding RNase T2 leads to cystic leukoencephalopathy, an autosomal recessive disorder with an indistinguishable clinical and neuroradiological phenotype. RNase T2 deficiency may interfere with brain development and myelination through angiogenesis or RNA metabolism.

REFERENCES

1. Wakita, K., et al. 1994. Higher-order structure of bovine mitochondrial tRNA(Phe) lacking the "conserved" GG and T psi CG sequences as inferred by enzymatic and chemical probing. *Nucleic Acids Res.* 22: 347-353.
2. Lin, H., et al. 2001. A novel homozygous deletion at chromosomal band 6q27 in an ovarian cancer cell line delineates the position of a putative tumor suppressor gene. *Cancer Lett.* 173: 63-70.
3. Acquati, F., et al. 2001. Cloning and characterization of a senescence inducing and class II tumor suppressor gene in ovarian carcinoma at chromosome region 6q27. *Oncogene* 20: 980-988.
4. Acquati, F., et al. 2005. Tumor and metastasis suppression by the human RNASET2 gene. *Int. J. Oncol.* 26: 1159-1168.
5. Campomenosi, P., et al. 2006. Characterization of RNase T2, the first human member of the Rh/T2/S family of glycoproteins. *Arch. Biochem. Biophys.* 449: 17-26.
6. Smirnov, P., et al. 2006. A recombinant human RNase T2 glycoprotein with antitumorigenic and antiangiogenic characteristics: expression, purification, and characterization. *Cancer* 107: 2760-2769.
7. Monti, L., et al. 2008. RNASET2 as a tumor antagonizing gene in a melanoma cancer model. *Oncol. Res.* 17: 69-74.

CHROMOSOMAL LOCATION

Genetic locus: Rnaset2a/Rnaset2b (mouse) mapping to 17 A1.

SOURCE

RNase T2 (K-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RNase T2 of mouse 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-109017 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RNase T2 (K-15) is recommended for detection of RNase T2 of mouse and rat 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).

Molecular Weight (predicted) of human RNase T2 isoforms: 29/14 kDa.

Molecular Weight (observed) of RNase T2 glycosylation: 22-41 kDa.

Molecular Weight of mouse RNase T2: 30 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.



Try **RNase T2 (E-5): sc-393729**, our highly recommended monoclonal alternative to RNase T2 (K-15).