# RNase 10 (M-17): sc-248441



The Power to Question

### **BACKGROUND**

RNase 10 (ribonuclease, RNase A family, 10) is a 216 amino acid secreted protein that belongs to the pancreatic ribonuclease family. The current function of the RNase 10 protein is not known, it does not have ribonuclease activity. The RNASE10 gene is conserved in chimpanzee, canine, bovine, mouse and rat, and maps to human chromosome 14q11.2. Chromosome 14 contains about 700 genes and 106 million base pairs and makes up about 3.5% of human cellular DNA. Chromosome 14 encodes the presinilin 1 (PSEN1) gene, which is one of the three key genes associated with the development of Alzheimer's disease. The SERPINA1 gene is located on chromosome 14 and when defective leads to the genetic disorder  $\alpha 1$ -antitrypsin deficiency. This disorder is characterized by severe lung complications and liver dysfunction. Notably, the immunoglobulin heavy chain locus is found on chromosome 14 and has been identified as a fusion with the chromosome 19 encoded protein BCL3 in the (14;19) translocations found in a variety of B cell malignancies.

### **REFERENCES**

- Heilig, R., Eckenberg, R., Petit, J.L., Fonknechten, N., Da Silva, C., Cattolico, L., et al. 2003. The DNA sequence and analysis of human chromosome 14. Nature 421: 601-607.
- Godbolt, A.K., Beck, J.A., Collinge, J., Garrard, P., Warren, J.D., Fox, N.C. and Rossor, M.N. 2004. A presenilin 1 R278I mutation presenting with language impairment. Neurology 63: 1702-1704.
- Cho, S., Beintema, J.J. and Zhang, J. 2005. The ribonuclease A superfamily
  of mammals and birds: identifying new members and tracing evolutionary
  histories. Genomics 85: 208-220.
- Stolk, J., Seersholm, N. and Kalsheker, N. 2006. α1-antitrypsin deficiency: current perspective on research, diagnosis, and management. Int. J. Chron. Obstruct. Pulmon. Dis. 1: 151-160.
- Martín-Subero, J.I., Ibbotson, R., Klapper, W., Michaux, L., Callet-Bauchu, E., Berger, F., Calasanz, M.J., De Wolf-Peeters, C., Dyer, M.J., Felman, P., Gardiner, A., Gascoyne, R.D., Gesk, S., Harder, L., Horsman, D.E., Kneba, M., Küppers, R., Majid, A., et al. 2007. A comprehensive genetic and histopathologic analysis identifies two subgroups of B-cell malignancies carrying a t(14;19)(q32;q13) or variant BCL3-translocation. Leukemia 21: 1532-1544.
- 6. Cruz, P.E., Mueller, C. and Flotte, T.R. 2007. The promise of gene therapy for the treatment of  $\alpha$ -1 antitrypsin deficiency. Pharmacogenomics 8: 1191-1198
- 7. Micci, F., Panagopoulos, I., Tjonnfjord, G.E., Kolstad, A., Delabie, J., Beiske, K. and Heim, S. 2007. Molecular cytogenetic characterization of t(14;19)(q32;p13), a new recurrent translocation in B cell malignancies. Virchows Arch. 450: 559-565.

## **CHROMOSOMAL LOCATION**

Genetic locus: Rnase10 (mouse) mapping to 14 C1.

## **RESEARCH USE**

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

#### **SOURCE**

RNase 10 (M-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of RNase 10 of mouse origin.

### **PRODUCT**

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

Blocking peptide available for competition studies, sc-248441 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### **APPLICATIONS**

RNase 10 (M-17) is recommended for detection of RNase 10 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); non cross-reactive with other RNase family members.

Suitable for use as control antibody for RNase 10 siRNA (m): sc-152988, RNase 10 shRNA Plasmid (m): sc-152988-SH and RNase 10 shRNA (m) Lentiviral Particles: sc-152988-V.

Molecular Weight of RNase 10: 24 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.

### **PROTOCOLS**

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

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