PRORP (h): 293T Lysate: sc-114148



The Power to Question

BACKGROUND

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

- Nagase, T., Ishikawa, K., Nakajima, D., Ohira, M., Seki, N., Miyajima, N., Tanaka, A., Kotani, H., Nomura, N. and Ohara, O. 1997. Prediction of the coding sequences of unidentified human genes. VII. The complete sequences of 100 new cDNA clones from brain which can code for large proteins *in vitro*. DNA Res. 4: 141-150.
- Heilig, R., Eckenberg, R., Petit, J., Fonknechten, N., Da Silva, C., Cattolico, L., Levy, M., Barbe, V., de Berardinis, V., Ureta-Vidal, A., Pelletier, E., Vico, V., Anthouard, V., Rowen, L., Madan, A., 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.
- 4. Stolk, J., Seersholm, N. and Kalsheker, N. 2006. α 1-antitrypsin deficiency: current perspective on research, diagnosis, and management. Int. J. Chron. Obstruct. Pulmon. Dis. 1: 151-160.
- 5. Vetrivel, K.S., Zhang, Y.W., Xu, H. and Thinakaran, G. 2006. Pathological and physiological functions of presenilins. Mol. Neurodegener. 1: 4.
- Albani, D., Roiter, I., Artuso, V., Batelli, S., Prato, F., Pesaresi, M., Galimberti, D., Scarpini, E., Bruni. A., Franceschi, M., Piras, M.R., Confaloni, A. and Forloni, G. 2007. Presenilin-1 mutation E318G and familial Alzheimer's disease in the Italian population. Neurobiol. Aging 28: 1682-1688.
- 7. Cruz, P.E., Mueller, C. and Flotte, T.R. 2007. The promise of gene therapy for the treatment of α -1 antitrypsin deficiency. Pharmacogenomics 8: 1191-1198.
- 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.
- Holzmann, J., Frank, P., Löffler, E., Bennett, K.L., Gerner, C. and Rossmanith, W. 2008. RNase P without RNA: identification and functional reconstitution of the human mitochondrial tRNA processing enzyme. Cell 135: 462-474.

CHROMOSOMAL LOCATION

Genetic locus: PRORP (human) mapping to 14q13.2.

PRODUCT

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

APPLICATIONS

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

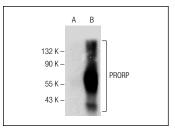
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

PRORP (D-2): sc-390380 is recommended as a positive control antibody for Western Blot analysis of enhanced human PRORP expression in PRORP transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

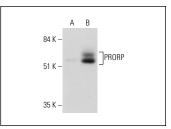
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lgG κ BP-HRP: sc-516102 or m-lgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



PRORP (D-2): sc-390380. Western blot analysis of PRORP expression in non-transfected: sc-117752 (A) and human PRORP transfected: sc-114148 (B) 293T whole cell lysates.



PRORP (C-4): sc-514705. Western blot analysis of PRORP expression in non-transfected: sc-117752 (A) and human PRORP transfected: sc-114148 (B) 293T whole cell lysates

STORAGE

Store at -20 $^{\circ}$ C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

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.