SANTA CRUZ BIOTECHNOLOGY, INC.

# PRORP (C-4): sc-514705

SANTA CRUZ BIOTECHNOLOGY

*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


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2. Heilig, R., et al. 2003. The DNA sequence and analysis of human chromosome 14. Nature 421: 601-607.
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4. Stolk, J., et al. 2006. $\alpha$1-antitrypsin deficiency: current perspective on research, diagnosis, and management. Int. J. Chron. Obstruct. Pulmon. Dis. 1: 151-160.
5. Vetrivel, K.S., et al. 2006. Pathological and physiological functions of presenilins. Mol. Neurodegener. 1: 4.
6. Albani, D., et al. 2007. Presenilin-1 mutation E318G and familial Alzheimer's disease in the Italian population. Neurobiol. Aging 28: 1682-1688.
7. Cruz, P.E., et al. 2007. The promise of gene therapy for the treatment of $\alpha$-1 antitrypsin deficiency. Pharmacogenomics 8: 1191-1198.
8. Micci, F., et al. 2007. Molecular cytogenetic characterization of t(14;19)(q32;p13), a new recurrent translocation in B cell malignancies. Virchows Arch. 450: 559-565.
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## CHROMOSOMAL LOCATION

Genetic locus: PRORP (human) mapping to 14q13.2; 1110008L16Rik (mouse) mapping to 12 C1.

## SOURCE

PRORP (C-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 538-556 near the C-terminus of PRORP of human origin.

## STORAGE

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

## PRODUCT

Each vial contains 200 µg $IgG_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514705 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

PRORP (C-4) is recommended for detection of PRORP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for PRORP siRNA (h): sc-92117, PRORP siRNA (m): sc-108150, PRORP shRNA Plasmid (h): sc-92117-SH, PRORP shRNA Plasmid (m): sc-108150-SH, PRORP shRNA (h) Lentiviral Particles: sc-92117-V and PRORP shRNA (m) Lentiviral Particles: sc-108150-V.

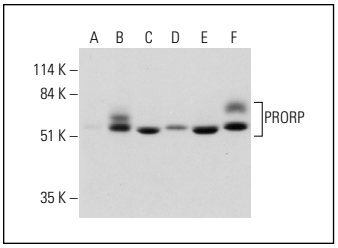
Molecular Weight of PRORP isoforms: 25/56/65/67 kDa.

Positive Controls: PRORP (h): 293T Lysate: sc-114148, U-87 MG cell lysate: sc-2411 or K-562 whole cell lysate: sc-2203.

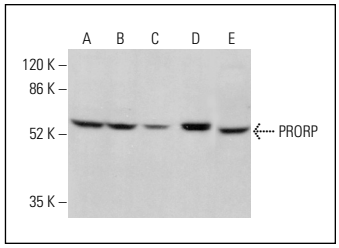
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG$\kappa$ BP-HRP: sc-516102 or m-IgG$\kappa$ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG$\kappa$ BP-FITC: sc-516140 or m-IgG$\kappa$ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA




PRORP (C-4): sc-514705. Western blot analysis of PRORP expression in non-transfected 293T: sc-117752 (**A**), human PRORP transfected 293T: sc-114148 (**B**), U-87 MG (**C**), SK-N-SH (**D**) and K-562 (**E**) whole cell lysates and human brain tissue extract (**F**).




PRORP (C-4): sc-514705. Western blot analysis of PRORP expression in K-562 (**A**), HEL 92.1.7 (**B**), T98G (**C**), EOC 20 (**D**) and C6 (**E**) whole cell lysates.

## RESEARCH USE

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