

# NRDE-2 (P-15): sc-163808

## 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 presenilin 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-anti-trypsin 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 Bcl-3 in the (14;19) translocations found in a variety of B cell malignancies. The NRDE-2 gene product has been provisionally designated NRDE-2 pending further characterization.

## REFERENCES

- Heilig, R., et al. 2003. The DNA sequence and analysis of human chromosome 14. *Nature* 421: 601-607.
- Godbolt, A.K., et al. 2004. A presenilin 1 R278I mutation presenting with language impairment. *Neurology* 63: 1702-1704.
- 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.
- Vetrivel, K.S., et al. 2006. Pathological and physiological functions of presenilins. *Mol. Neurodegener.* 1: 4.
- Albani, D., et al. 2007. Presenilin-1 mutation E318G and familial Alzheimer's disease in the Italian population. *Neurobiol. Aging* 28: 1682-1688.
- Cruz, P.E., et al. 2007. The promise of gene therapy for the treatment of  $\alpha$ 1 antitrypsin deficiency. *Pharmacogenomics* 8: 1191-1198.
- Filley, C.M., et al. 2007. The genetics of very early onset Alzheimer disease. *Cogn. Behav. Neurol.* 20: 149-156.

## CHROMOSOMAL LOCATION

Genetic locus: NRDE2 (human) mapping to 14q32.11; BC002230 (mouse) mapping to 12 E.

## SOURCE

NRDE-2 (P-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of NRDE-2 of human 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-163808 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

NRDE-2 (G-16) is recommended for detection of NRDE-2 of human origin, BC002230 of mouse origin and RGD1565082 of rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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); non cross-reactive with other NRDE family members.

NRDE-2 (P-15) is also recommended for detection of NRDE-2 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for NRDE-2 siRNA (h): sc-92199, BC002230 siRNA (m): sc-141485, NRDE-2 shRNA Plasmid (h): sc-92199-SH, BC002230 shRNA Plasmid (m): sc-141485-SH, NRDE-2 shRNA (h) Lentiviral Particles: sc-92199-V and BC002230 shRNA (m) Lentiviral Particles: sc-141485-V.

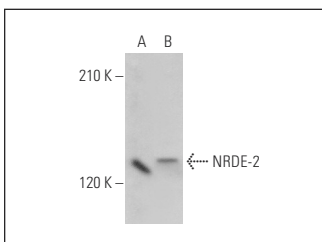
Molecular Weight of NRDE-2: 133 kDa.

Positive Controls: PC-12 cell lysate: sc-2250 or J774.A1 cell lysate: sc-3802.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



NRDE-2 (P-15): sc-163808. Western blot analysis of NRDE-2 expression in PC-12 (A) and J774.A1 (B) whole cell lysates.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.