

# C14orf45 (E-16): sc-245311

## BACKGROUND

C14orf45 (chromosome 14 open reading frame 45) is a 529 amino acid protein encoded by a gene that maps to human chromosome 14q24.3. 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-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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3. 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.
4. Vetrivel, K.S., et al. 2006. Pathological and physiological functions of presenilins. *Mol. Neurodegener.* 1: 4.
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## CHROMOSOMAL LOCATION

Genetic locus: C14orf45 (human) mapping to 14q24.3; 2900006K08Rik (mouse) mapping to 12 D1.

## SOURCE

C14orf45 (E-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of C14orf45 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  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-245311 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

C14orf45 (E-16) is recommended for detection of C14orf45 of human origin, 2900006K08Rik of mouse origin and the corresponding rat homolog 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).

C14orf45 (E-16) is also recommended for detection of C14orf45 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for C14orf45 siRNA (h): sc-92422, 2900006K08Rik siRNA (m): sc-108863, C14orf45 shRNA Plasmid (h): sc-92422-SH, 2900006K08Rik shRNA Plasmid (m): sc-108863-SH, C14orf45 shRNA (h) Lentiviral Particles: sc-92422-V and 2900006K08Rik shRNA (m) Lentiviral Particles: sc-108863-V.

Molecular Weight of C14orf45: 62 kDa.

Positive Controls: ZR-75-1 cell lysate: sc-2241.

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