SANTA CRUZ BIOTECHNOLOGY, INC.

C14orf159 (N-13): sc-240033

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

C14orf159 (chromosome 14 open reading frame 159) is a 616 amino acid mitochondrial protein that belongs to the UPF0317 family. Existing as six alternatively spliced isoforms, C14orf159 is encoded by a gene that maps to human chromosome 14q32.11. 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 α1-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

1. Heilig, R., et al. 2003. The DNA sequence and analysis of human chromosome 14. Nature 421: 601-607.
2. Godbolt, A.K., et al. 2004. A presenilin 1 R278I mutation presenting with language impairment. Neurology 63: 1702-1704.
3. Stolk, J., et al. 2006. α1-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.
5. Albani, D., et al. 2007. Presenilin-1 mutation E318G and familial Alzheimer's disease in the Italian population. Neurobiol. Aging 28: 1682-1688.
6. Cruz, P.E., et al. 2007. The promise of gene therapy for the treatment of α-1 antitrypsin deficiency. Pharmacogenomics 8: 1191-1198.
7. Filley, C.M., et al. 2007. The genetics of very early onset Alzheimer disease. Cogn. Behav. Neurol. 20: 149-156.
8. Martín-Subero, J.I., 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.
9. 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.

CHROMOSOMAL LOCATION

Genetic locus: C14orf159 (human) mapping to 14q32.11.

SOURCE

C14orf159 (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of C14orf159 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 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-240033 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

C14orf159 (N-13) is recommended for detection of C14orf159 of human origin by Western Blotting (starting dilution 1:200, 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 C14orf159 siRNA (h): sc-92378, C14orf159 shRNA Plasmid (h): sc-92378-SH and C14orf159 shRNA (h) Lentiviral Particles: sc-92378-V.

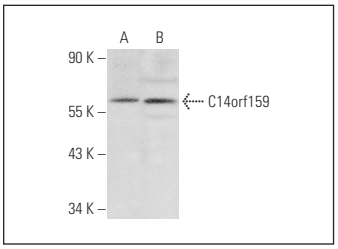
Molecular Weight of C14orf159: 66 kDa.

Positive Controls: RT-4 whole cell lysate: sc-364257, Hep G2 cell lysate: sc-2227 or Ramos cell lysate: sc-2216.

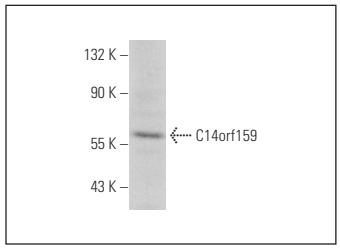
RECOMMENDED SECONDARY REAGENTS

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



C14orf159 (N-13): sc-240033. Western blot analysis of C14orf159 expression in RT-4 (**A**) and Hep G2 (**B**) whole cell lysates.



C14orf159 (N-13): sc-240033. Western blot analysis of C14orf159 expression in Ramos whole cell lysate.

RESEARCH USE

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