

# FAM158A (L-12): sc-137977

## BACKGROUND

FAM158A, also designated CGI-112 or C14orf122, is a 108 amino acid protein that belongs to the UPF0172 (NOC4) family. The gene encoding FAM158A maps to human chromosome 14, which 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-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 Bcl-3 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.
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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.
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  $\alpha$ 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 Bcl-3-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.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

## CHROMOSOMAL LOCATION

Genetic locus: FAM158A (human) mapping to 14q12; Fam158a (mouse) mapping to 14 C3.

## SOURCE

FAM158A (L-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of FAM158A of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-137977 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

FAM158A (L-12) is recommended for detection of FAM158A of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other C14orf family members.

Suitable for use as control antibody for FAM158A siRNA (h): sc-92448, FAM158A siRNA (m): sc-108235, FAM158A shRNA Plasmid (h): sc-92448-SH, FAM158A shRNA Plasmid (m): sc-108235-SH, FAM158A shRNA (h) Lentiviral Particles: sc-92448-V and FAM158A shRNA (m) Lentiviral Particles: sc-108235-V.

Molecular Weight of FAM158A: 23 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.