

ZNF410 (C-17): sc-249888

BACKGROUND

ZNF410 (zinc finger protein 410), also known as APA1 (another partner for ARF 1), is a 478 amino acid nuclear protein that contains 5 C₂H₂-type zinc fingers and exists as 3 alternatively spliced isoforms. Interacting with p14 ARF, ZNF410 acts as a transcription factor that activates the transcription of matrix-remodeling genes such as MMP-1 during fibroblast senescence. The gene that encodes ZNF410 consists of approximately 45,661 bases and maps to human chromosome 14q24.3. Housing over 700 genes, chromosome 14 comprises nearly 3.5% of the human genome. 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 also located on chromosome 14 and, when defective, leads to the genetic disorder α 1-antitrypsin deficiency, which is characterized by severe lung complications and liver dysfunction.

REFERENCES

- Zech, L., Gahrton, G., Hammarström, L., Juliusson, G., Mellstedt, H., Robèrt, K.H. and Smith, C.I. 1984. Inversion of chromosome 14 marks human T-cell chronic lymphocytic leukaemia. *Nature* 308: 858-860.
- Aisenberg, A.C., Krontiris, T.G., Mak, T.W. and Wilkes, B.M. 1985. Rearrangement of the gene for the β chain of the T-cell receptor in T-cell chronic lymphocytic leukemia and related disorders. *N. Engl. J. Med.* 313: 529-533.
- Schellenberg, G.D., Bird, T.D., Wijsman, E.M., Orr, H.T., Anderson, L., Nemens, E., White, J.A., Bonnycastle, L., Weber, J.L. and Alonso, M.E. 1992. Genetic linkage evidence for a familial Alzheimer's disease locus on chromosome 14. *Science* 258: 668-671.
- Benanti, J.A., Williams, D.K., Robinson, K.L., Ozer, H.L. and Galloway, D.A. 2002. Induction of extracellular matrix-remodeling genes by the senescence-associated protein APA-1. *Mol. Cell. Biol.* 22: 7385-7397.
- Avramopoulos, D., Fallin, M.D. and Bassett, S.S. 2005. Linkage to chromosome 14q in Alzheimer's disease (AD) patients without psychotic symptoms. *Am. J. Med. Genet. B Neuropsychiatr. Genet.* 132B: 9-13.
- Larner, A.J. and Doran, M. 2009. Genotype-phenotype relationships of presenilin-1 mutations in Alzheimer's disease: an update. *J. Alzheimers Dis.* 17: 259-265.
- Topic, A., Alempijevic, T., Milutinovic, A.S. and Kovacevic, N. 2009. α 1-antitrypsin phenotypes in adult liver disease patients. *Ups. J. Med. Sci.* 114: 228-234.

CHROMOSOMAL LOCATION

Genetic locus: ZNF410 (human) mapping to 14q24.3; Zfp410 (mouse) mapping to 12 D1.

SOURCE

ZNF410 (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of ZNF410 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-249888 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ZNF410 (C-17) is recommended for detection of ZNF410 of mouse, rat and human origin 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); non cross-reactive with other ZNF family members.

Suitable for use as control antibody for ZNF410 siRNA (h): sc-92097, ZNF410 siRNA (m): sc-155712, ZNF410 shRNA Plasmid (h): sc-92097-SH, ZNF410 shRNA Plasmid (m): sc-155712-SH, ZNF410 shRNA (h) Lentiviral Particles: sc-92097-V and ZNF410 shRNA (m) Lentiviral Particles: sc-155712-V.

Molecular Weight of ZNF410 isoforms: 52/30/47 kDa.

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.

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 or our catalog for detailed protocols and support products.