



## C21orf121 (S-17): sc-83209

### BACKGROUND

The smallest of the human chromosomes, 21 makes up about 1.5% of the human genome. Chromosome 21 contains nearly 300 genes and 47 million base pairs. Down syndrome, also known as trisomy 21, is the disease most commonly associated with chromosome 21. Alzheimer's disease, Jervell and Lange-Nielsen syndrome and amyotrophic lateral sclerosis are also associated with chromosome 21. Translocations are found to occur between chromosome 21 and 8, and chromosome 21 and 12 in certain leukemias. The C21orf121 gene product has been provisionally designated C21orf121 pending further characterization.

### REFERENCES

1. Tesson, F., et al. 1996. Exclusion of KCNE1 (IsK) as a candidate gene for Jervell and Lange-Nielsen syndrome. *J. Mol. Cell. Cardiol.* 28: 2051-2055.
2. Tyson, J., et al. 1997. IsK and KvLQT1: mutation in either of the two sub-units of the slow component of the delayed rectifier potassium channel can cause Jervell and Lange-Nielsen syndrome. *Hum. Mol. Genet.* 6: 2179-2185.
3. Müller, S., et al. 2000. Molecular cytogenetic dissection of human chromosomes 3 and 21 evolution. *Proc. Natl. Acad. Sci. USA* 97: 206-211.
4. Mao, R., et al. 2005. Primary and secondary transcriptional effects in the developing human Down syndrome brain and heart. *Genome Biol.* 6: R107.
5. Robakis, N.K. 2006. The discovery and mapping to chromosome 21 of the Alzheimer's amyloid gene: history revised. *J. Alzheimers Dis.* 10: 453-455.
6. Sun, X., et al. 2006. BACE2, as a novel APP  $\theta$ -secretase, is not responsible for the pathogenesis of Alzheimer's disease in Down syndrome. *FASEB J.* 20: 1369-1376.
7. Ait Yahya-Graison, E., et al. 2007. Classification of human chromosome 21 gene-expression variations in Down syndrome: impact on disease phenotypes. *Am. J. Hum. Genet.* 81: 475-491.
8. Peterson, L.F., et al. 2007. Acute myeloid leukemia with the 8q22;21q22 translocation: secondary mutational events and alternative t(8;21) transcripts. *Blood* 110: 799-805.
9. Ryoo, S.R., et al. 2007. DYRK1A-mediated hyperphosphorylation of Tau: a functional link between Down syndrome and Alzheimer's disease. *J. Biol. Chem.* 282: 34850-34857.

### CHROMOSOMAL LOCATION

Genetic locus: C21orf121 (human) mapping to 21q22.3.

### SOURCE

C21orf121 (S-17) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of C21orf121 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 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-83209 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

C21orf121 (S-17) is recommended for detection of C21orf121 of 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).

Suitable for use as control antibody for C21orf121 siRNA (h): sc-91469, C21orf121 shRNA Plasmid (h): sc-91469-SH and C21orf121 shRNA (h) Lentiviral Particles: sc-91469-V.

Positive Controls: HeLa nuclear extract: sc-2120, K-562 nuclear extract: sc-2130 or Hs 181.Tes whole cell lysate.

### 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.

### 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.