

C7orf46 (C-16): sc-242260

BACKGROUND

Chromosome 7 is about 158 million bases long, encodes over 1000 genes and makes up about 5% of the human genome. Chromosome 7 has been linked to Osteogenesis imperfecta, Pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome. The deletion of a portion of the q arm of chromosome 7 is associated with Williams-Beuren syndrome, a condition characterized by mild mental retardation, an unusual comfourt and friendliness with strangers and an elfin appearance. Deletions of portions of the q arm of chromosome 7 are also seen in a number of myeloid disorders including cases of acute myelogenous leukemia and myelodysplasia. The C7orf46 gene product has been provisionally designated C7orf46 pending further characterization.

REFERENCES

1. Tsiouras, P., Myers, J.C., Ramirez, F. and Prockop, D.J. 1983. Restriction fragment length polymorphism associated with the pro α 2I gene of human type I procollagen. Application to a family with an autosomal dominant form of osteogenesis imperfecta. *J. Clin. Invest.* 72: 1262-1267.
2. Liang, H., Fairman, J., Claxton, D.F., Nowell, P.C., Green, E.D. and Nagarajan, L. 1998. Molecular anatomy of chromosome 7q deletions in myeloid neoplasms: evidence for multiple critical loci. *Proc. Natl. Acad. Sci. USA* 95: 3781-3785.
3. Hillier, L.W., Fulton, R.S., Fulton, L.A., Graves, T.A., Pepin, K.H., Wagner-McPherson, C., Layman, D., Maas, J., Jaeger, S., Walker, R., Wylie, K., Sekhon, M., Becker, M.C., et al. 2003. The DNA sequence of human chromosome 7. *Nature* 424: 157-164.
4. Eckert, M.A., Galaburda, A.M., Mills, D.L., Bellugi, U., Korenberg, J.R. and Reiss, A.L. 2006. The neurobiology of Williams syndrome: cascading influences of visual system impairment? *Cell. Mol. Life Sci.* 63: 1867-1875.
5. Osborne, L.R., Joseph-George, A.M. and Scherer, S.W. 2006. Williams-Beuren syndrome diagnosis using fluorescence *in situ* hybridization. *Methods Mol. Med.* 126:113-128.
6. Reiner, O., Sapoznik, S. and Sapir, T. 2006. Lissencephaly 1 linking to multiple diseases: mental retardation, neurodegeneration, schizophrenia, male sterility, and more. *Neuromolecular Med.* 8: 547-565.
7. Shimamura, A. 2006. Shwachman-Diamond syndrome. *Semin. Hematol.* 43: 178-188.
8. Brezinová, J., Zemanová, Z., Ransdorfová, S., Pavlistová, L., Babická, L., Housková, L., Melichercíková, J., Sisková, M., Cermák, J. and Michalová, K. 2007. Structural aberrations of chromosome 7 revealed by a combination of molecular cytogenetic techniques in myeloid malignancies. *Cancer Genet. Cytogenet.* 173: 10-16.
9. Leone, G., Pagano, L., Ben-Yehuda, D. and Voso, M.T. 2007. Therapy-related leukemia and myelodysplasia: susceptibility and incidence. *Haematologica* 92: 1389-1398.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

CHROMOSOMAL LOCATION

Genetic locus: FAM221A (human) mapping to 7p15.3.

SOURCE

C7orf46 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of C7orf46 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-242260 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

C7orf46 (C-16) is recommended for detection of C7orf46 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).

C7orf46 (C-16) is also recommended for detection of C7orf46 in additional species, including equine.

Suitable for use as control antibody for C7orf46 siRNA (h): sc-89892, C7orf46 shRNA Plasmid (h): sc-89892-SH and C7orf46 shRNA (h) Lentiviral Particles: sc-89892-V.

Molecular Weight of C7orf46: 33 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.

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.