SANTA CRUZ BIOTECHNOLOGY, INC.

DYX1C1 (N-20): sc-48485

BACKGROUND

The gene encoding DYX1C1 maps in the 15q21.3 region, which is disrupted by a translocation t(2;15)(q11;q21) and segregates with dyslexia. Two sequence changes in DYX1C1, including one involving the translation initiation sequence and an Elk-1 transcription factor binding site (-3G → A) and a codon (1249G → T), introduce a premature stop codon and truncate the protein by 4 amino acids. DYX1C1 encodes a nuclear tetratricopeptide repeat domain protein that is dynamically regulated in brain. In human brain, DYX1C1 protein localizes to a fraction of cortical neurons and white matter glial cells. It is also expressed in lung, kidney and testis.

REFERENCES

1. Taipale, M., Kaminen, N., Nopola-Hemmi, J., Haltia, T., Myllyluoma, B., Lyytinen, H., Muller, K., Kaaranen, M., Lindsberg, P.J., Hannula-Jouppi, K. and Kere, J. 2003. A candidate gene for developmental dyslexia encodes a nuclear tetratricopeptide repeat domain protein dynamically regulated in brain. Proc. Nat. Acad. Sci. USA 100: 11553-11558.
2. Scerri, T.S., Fisher, S.E., Francks, C., MacPhie, I.L., Paracchini, S., Richardson, A.J., Stein, J.F. and Monaco, A.P. 2004. Putative functional alleles of DYX1C1 are not associated with dyslexia susceptibility in a large sample of sibling pairs from the UK. J. Med. Genet. 41: 853-857.
3. Ylisaukko-Oja, T., Peyrard-Janvid, M., Lindgren, C.M., Rehnström, K., Vanhala, R., Peltonen, L., Järvelä, I. and Kere, J. 2004. Family-based association study of DYX1C1 variants in autism. Eur. J. Hum. Genet. 13: 127-130.
4. Marino, C., Giorda, R., Luisa Lorusso, M., Vanzin, L., Salandi, N., Nobile, M., Citterio, A., Beri, S., Crespi, V., Battaglia, M. and Molteni, M. 2005. A family-based association study does not support DYX1C1 on 15q21.3 as a candidate gene in developmental dyslexia. Eur. J. Hum. Genet. 13: 491-499.
5. Fisher, S.E. and Francks, C. 2006. Genes, cognition and dyslexia: learning to read the genome. Trends Cogn. Sci. 10: 250-257.
6. McGrath, L.M., Smith, S.D. and Pennington, B.F. 2006. Breakthroughs in the search for dyslexia candidate genes. Trends Mol. Med. 12: 333-341.

CHROMOSOMAL LOCATION

Genetic locus: DYX1C1 (human) mapping to 15q21.3; Dyx1c1 (mouse) mapping to 9 D.

SOURCE

DYX1C1 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DYX1C1 of human origin.

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-48485 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

DYX1C1 (N-20) is recommended for detection of DYX1C1 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).

DYX1C1 (N-20) is also recommended for detection of DYX1C1 in additional species, including equine and canine.

Suitable for use as control antibody for DYX1C1 siRNA (h): sc-60562, DYX1C1 siRNA (m): sc-60563, DYX1C1 shRNA Plasmid (h): sc-60562-SH, DYX1C1 shRNA Plasmid (m): sc-60563-SH, DYX1C1 shRNA (h) Lentiviral Particles: sc-60562-V and DYX1C1 shRNA (m) Lentiviral Particles: sc-60563-V.

Molecular Weight of DYX1C1: 48 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.