

# DYX1C1 (C-20): sc-48483

## BACKGROUND

The gene encoding DYX1C1 maps in the 15q21 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., et al. 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., et al. 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., et al. 2004. Family-based association study of DYX1C1 variants in autism. *Eur. J. Hum. Genet.* 13: 127-130.
4. Marino, C., et al. 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., et al. 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 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-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-48483 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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.

## APPLICATIONS

DYX1C1 (C-20) is recommended for detection of DYX1C1 isoform 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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 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.

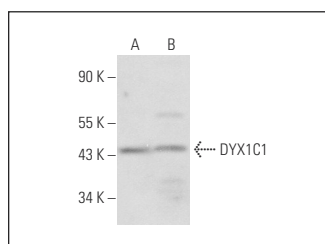
Molecular Weight of DYX1C1: 48 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or NIH/3T3 nuclear extract: sc-2138.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



DYX1C1 (C-20): sc-48483. Western blot analysis of DYX1C1 expression in NIH/3T3 nuclear extract (A) and HeLa whole cell lysate (B).

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.