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Product Information

Anti-DYX1C1
produced in rabbit, affinity isolated antibody

Product Number **SAB4200127**

Product Description

Anti-DYX1C1 is developed in rabbit using as the immunogen a synthetic peptide corresponding to a fragment of human DYX1C1 (GeneID 161582) conjugated to KLH. The corresponding sequence is identical in mouse and rat DYX1C1. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-DYX1C1 specifically recognizes human DYX1C1. The antibody may be used in several immunochemical techniques including immunoblotting (~48 kDa). Detection of the DYX1C1 band by immunoblotting is specifically inhibited by the DYX1C1 immunizing peptide.

Dyslexia, also known as reading disability (RD), is a complex developmental behavioral disorder characterized by severe difficulties in learning to read and spell. It affects 5–12% of school-aged children. Abnormalities in the pattern of cortical neuronal migration and maturation have been linked to developmental dyslexia. In recent years, linkage studies have identified chromosomal regions likely to contain genes contributing to dyslexia.[1-2] Four candidate dyslexia susceptibility genes (CDSGs) have been reported including *DCDC2*, *DYX1C1*, *ROBO1*, and *DLX2/KIAA0319*, involved in neuronal migration and other developmental processes.[1]

DYX1C1 (dyslexia susceptibility 1 candidate 1, also known as RD, DYX1, EKN1) is a recently identified candidate gene implicated in dyslexia.[2,3] The *DYX1C1* gene is located near the DYX1 locus in chromosome 15q21, that is disrupted by a translocation segregating coincidentally with dyslexia. DYX1C1 contains three TPR domains, thought to function as protein interaction modules. DYX1C1 is expressed in several tissues, including the brain, and the protein resides in the nucleus. Knockdown of *DYX1C1* by RNAi in rats causes deficit in neuronal migration in the developing neocortex, auditory processing, and spatial learning, supporting the role of *DYX1C1* in dyslexia.[4] DYX1C1 has been recently implicated as a cancer biomarker in colorectal cancer.[5]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~1.5 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots at –20 °C. Repeated freezing and thawing is not recommended. Storage in “frost-free” freezers is also not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody concentration of 1–2 μg/mL is recommended using HEK-293T cell lysate expressing human DYX1C1.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

1. McGrath, L.M., et al., *Trends Mol. Med.,* **12**, 333-341 (2006).
2. Galaburda, A.M., et al., *Nature Neurosci.,* **9**, 1213-1217 (2006).
3. Taipale, M., et al., *Proc. Natl. Acad. Sci. USA,* **100**, 11553-11558 (2003).
4. Threlkeld, S.W., et al., *Brain Res. Bull.*, **71**, 508-514 (2007).
5. Kim, Y.J., et al., *J. Cancer Res. Clin. Oncol.*, **135**, 265-270 (2009).

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