

AP05079PU-N

Polyclonal Antibody to DYRK - Purified

Alternate names:

DYRK1A, Dual specificity YAK1-related kinase, Dual specificity tyrosine-phosphorylation-regulated kinase 1A, MNB, MNBH

Quantity:

0.1 mg

Concentration:

1.0 mg/ml

Background:

Dyrk, the vertebrate of *Drosophila* minibrain, is a dual-specificity kinase predominately expressed in the central nervous system. The human clone has been isolated from the Down's syndrome critical region and it is potentially implicated in the neuropathology of the disease. Main features of the protein include an N-terminal nuclear translocation signal, a putative leucine zipper domain, a core kinase domain with some similarity to kinases involved in cell cycle regulation and a C-terminal PEST sequence. The Dyrk kinase can be phosphorylated on tyrosine residues, leading to an active kinase that can phosphorylate itself or exogenous substrates on both tyrosine and serine/threonine residues. Dyrk can also multimerize and translocate to the nucleus. Present studies on Dyrk suggest a potential role for this kinase in the exit from the cell cycle and the beginning of neuronal differentiation.

Host / Isotype:

Sheep / IgG

Immunogen:

Recombinant protein corresponding to amino acids 486 to 763 of the Mouse Dyrk1A protein.

Format:

State: Liquid purified Ig (0.2 µm sterile filtered)

Buffer System: Phosphate buffered saline with 0.08% Sodium Azide as preservative.

Applications:

Western Blot: 1 µg/ml.

Immunoprecipitation.

Immunofluorescence: 1-10 µg/ml.

Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:

This antibody recognizes DYRK.

Species: Human, Mouse and Rat.

Other species not tested.

Storage:

Store the antibody at -20°C.

Avoid repeated freezing and thawing.

Shelf life: One year from despatch.

General Readings:

1. Kentrup H, Becker W, Heukelbach J, Wilmes A, Schürmann A, Huppertz C, et al. Dyrk, a dual specificity protein kinase with unique structural features whose activity is dependent on tyrosine residues between subdomains VII and VIII. *J Biol Chem.* 1996 Feb 16;271(7):3488-95. PubMed PMID: 8631952.

2. Song WJ, Sternberg LR, Kasten-Sportès C, Keuren ML, Chung SH, Slack AC, et al. Isolation of human and murine homologues of the *Drosophila* minibrain gene: human homologue maps to 21q22.2 in the Down syndrome "critical region". *Genomics.* 1996 Dec 15;38(3):331-9. PubMed PMID: 8975710.

3. Becker W, Joost HG. Structural and functional characteristics of Dyrk, a novel

subfamily of protein kinases with dual specificity. Prog Nucleic Acid Res Mol Biol. 1999;62:1-17. PubMed PMID: 9932450.

Pictures:

Figure 1. Immunoprecipitation of Dyrk from 293T transfected cells. Immunoprecipitation with: 1. Control Ab 2. Anti-MNP 2 µg/ml 3. anti-Dyrk 2 µg/ml 4. anti-Dyrk 10 µg/ml 5. Competitor's anti-Dyrk Ab 10 µg/ml, Western blot performed with anti-Dyrk Ab at 2 µg/ml.

