**BACKGROUND**

Dyrk (for dual specificity tyrosine phosphorylation regulated kinase) is the homolog of the *Drosophila* mnb (minibrain) gene which is required for neurogenesis. Dyrk is a dual-specificity tyrosine kinase and serine/threonine kinase, which is itself regulated by tyrosine phosphorylation. Several mammalian Dyrk related proteins have been identified and are thought to compose a family of dual specific protein kinases. Dyrk family members, including Dyrk1A (dual specificity tyrosine-phosphorylation-regulated kinase 1A), Dyrk1B, Dyrk1C, Dyrk2, Dyrk3, Dyrk4A and Dyrk4B, are thought to be involved in diverse cellular functions. Localized to the nucleus and highly expressed in testis, muscle and the developing nervous system, Dyrk1A, also known as MNB or MNBH, functions to phosphorylate serine, threonine and tyrosine residues on various substrates involved in signaling pathways that regulate cell proliferation. Dyrk1A is a candidate gene for learning defects that are involved in Down’s syndrome (DS), suggesting a possible role for Dyrk1A in the development of DS. Four isoforms of Dyrk1A exist due to alternative splicing events.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: Dyrk1A (human) mapping to 21q22.13; Dyrk1a (mouse) mapping to 16 C4.

**SOURCE**

Dyrk1A (RR.7) is a mouse monoclonal antibody raised against recombinant Dyrk1A of human origin.

**PRODUCT**

Each vial contains 100 µg IgG κ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

**APPLICATIONS**

Dyrk1A (RR.7) is recommended for detection of Dyrk1A 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)) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Dyrk1A siRNA (h): sc-39007, Dyrk1A siRNA (m): sc-39008, Dyrk1A shRNA Plasmid (h): sc-39007-SH, Dyrk1A shRNA Plasmid (m): sc-39008-SH, Dyrk1A shRNA (h) Lentiviral Particles: sc-39007-V and Dyrk1A shRNA (m) Lentiviral Particles: sc-39008-V.

Molecular Weight of Dyrk1A: 86 kDa.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:

1. Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2209 or Hep G2 cell lysate: sc-2209.

**DATA**

![Western Blot Analysis](image)

**STORAGE**

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

**REFERENCES**


