SANTA CRUZ BIOTECHNOLOGY, INC.

Dyrk4 (B66): sc-130424

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 specificity protein kinases. Dyrk family members, including Dyrk1A (originally Dyrk), Dyrk1B, Dryk1C, Dyrk2, Dyrk3 and Dyrk4, are thought to be involved in diverse cellular functions. Dyrk4 is a testis-specific kinase found mainly in post-meoitic spermatids, but has also been implicated in neuronal differentiation. It exists as two isoforms, named Dyrk4A and Dyrk4B, which share greater than 95% sequence homology. Dyrk4 deficiency has been shown to have no effect on male fertility, indicating a possible redundancy in the spermiogenesis pathway.

REFERENCES

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4. Becker, W., Weber, Y., Wetzel, K., Eirmbter, K., Tejedor, F.J. and Joost, H.G. 1998. Sequence characteristics, subcellular localization, and substrate specificity of Dyrk-related kinases, a novel family of dual specificity protein kinases. J. Biol. Chem. 273: 25893-25902.
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CHROMOSOMAL LOCATION

Genetic locus: DYRK4 (human) mapping to 12p13.32.

SOURCE

Dyrk4 (B66) is a mouse monoclonal antibody raised against recombinant Dyrk4 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Dyrk4 (B66) is recommended for detection of Dyrk4 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for Dyrk4 siRNA (h): sc-72231, Dyrk4 shRNA Plasmid (h): sc-72231-SH and Dyrk4 shRNA (h) Lentiviral Particles: sc-72231-V.

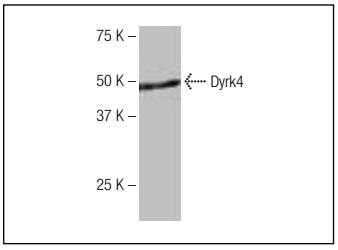
Molecular Weight of Dyrk4: 60 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or Hep G2 cell lysate: sc-2227.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-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).

DATA



Dyrk4 (B66): sc-130424. Western blot analysis of Dyrk4 expression in Hep G2 whole cell lysate.

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.

PROTOCOLS

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