

**DYRK1A Antibody (Center)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP7555c**

### Specification

#### DYRK1A Antibody (Center) - Product Information

Application	WB,E
Primary Accession	<a href="#">Q13627</a>
Other Accession	<a href="#">P85051</a>
Reactivity	Human
Predicted	Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	389-418

#### DYRK1A Antibody (Center) - Additional Information

##### Gene ID 1859

##### Other Names

Dual specificity tyrosine-phosphorylation-regulated kinase 1A, Dual specificity YAK1-related kinase, HP86, Protein kinase minibrain homolog, MNBH, hMNB, DYRK1A, DYRK, MNB, MNBH

##### Target/Specificity

This DYRK1A antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 389-418 amino acids from the Central region of human DYRK1A.

##### Dilution

WB~~1:2000

E~~Use at an assay dependent concentration.

##### Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

##### Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

##### Precautions

DYRK1A Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

#### DYRK1A Antibody (Center) - Protein Information

Name DYRK1A {ECO:0000303|PubMed:25620562, ECO:0000312|HGNC:HGNC:3091}

**Function** Dual-specificity kinase which possesses both serine/threonine and tyrosine kinase activities (PubMed:[20981014](#), PubMed:[21127067](#), PubMed:[23665168](#), PubMed:[30773093](#), PubMed:[8769099](#)). Exhibits a substrate preference for proline at position P+1 and arginine at position P-3 (PubMed:[23665168](#)). Plays an important role in double-strand breaks (DSBs) repair following DNA damage (PubMed:[31024071](#)). Mechanistically, phosphorylates RNF169 and increases its ability to block accumulation of TP53BP1 at the DSB sites thereby promoting homologous recombination repair (HRR) (PubMed:[30773093](#)). Also acts as a positive regulator of transcription by acting as a CTD kinase that mediates phosphorylation of the CTD (C-terminal domain) of the large subunit of RNA polymerase II (RNAP II) POLR2A (PubMed:[25620562](#), PubMed:[29849146](#)). May play a role in a signaling pathway regulating nuclear functions of cell proliferation (PubMed:[14500717](#)). Modulates alternative splicing by phosphorylating the splice factor SRSF6 (By similarity). Has pro- survival function and negatively regulates the apoptotic process (By similarity). Promotes cell survival upon genotoxic stress through phosphorylation of SIRT1 (By similarity). This in turn inhibits p53/TP53 activity and apoptosis (By similarity). Phosphorylates SEPTIN4, SEPTIN5 and SF3B1 at 'Thr-434' (By similarity).

#### Cellular Location

Nucleus. Nucleus speckle {ECO:0000250|UniProtKB:Q61214}

#### Tissue Location

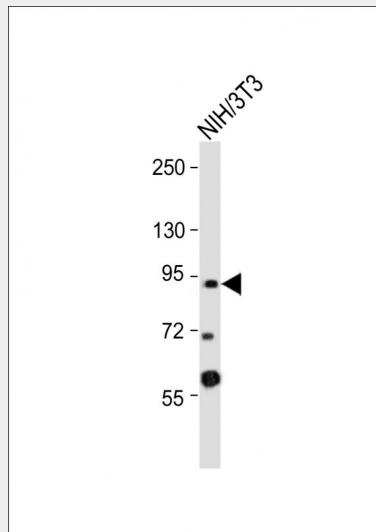
Ubiquitous. Highest levels in skeletal muscle, testis, fetal lung and fetal kidney.

### DYRK1A Antibody (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### DYRK1A Antibody (Center) - Images



Anti-DYRK1A Antibody (Center) at 1:2000 dilution + NIH/3T3 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 86 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

#### **DYRK1A Antibody (Center) - Background**

DYRK1A is a member of the Dual-specificity tyrosine phosphorylation-regulated kinase (DYRK) family. This member contains a nuclear targeting signal sequence, a protein kinase domain, a leucine zipper motif, and a highly conservative 13-consecutive-histidine repeat. It catalyzes its autophosphorylation on serine/threonine and tyrosine residues. It may play a significant role in a signaling pathway regulating cell proliferation and may be involved in brain development. This gene is a homolog of *Drosophila* *mnb* (minibrain) gene and rat *Dyrk* gene. It is localized in the Down syndrome critical region of chromosome 21, and is considered to be a strong candidate gene for learning defects associated with Down syndrome.

#### **DYRK1A Antibody (Center) - References**

Adayev,T., Biochemistry 46 (25), 7614-7624 (2007)  
Chang,H.S., Int. J. Cancer 120 (11), 2377-2385 (2007)  
Alvarez,M., Mol. Biol. Cell 18 (4), 1167-1178 (2007)  
Wissing,J., Mol. Cell Proteomics 6 (3), 537-547 (2007)