

## **Dyrk1A Polyclonal Antibody**

**Catalog # AP69618** 

### **Specification**

## **Dyrk1A Polyclonal Antibody - Product Information**

Application Primary Accession Reactivity Host Clonality WB, IHC-P, IF
O13627
Human, Mouse, Rat
Rabbit
Polyclonal

## Dyrk1A Polyclonal Antibody - Additional Information

### Gene ID 1859

### **Other Names**

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

## **Dilution**

WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/20000. Not yet tested in other applications. IHC-P~~N/A IF~~1:50~200

### **Format**

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

# **Storage Conditions**

-20°C

## **Dyrk1A Polyclonal Antibody - 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:<a href="http://www.uniprot.org/citations/20981014" target="\_blank">20981014</a>, PubMed:<a href="http://www.uniprot.org/citations/21127067" target="\_blank">21127067</a>, PubMed:<a href="http://www.uniprot.org/citations/23665168" target="\_blank">23665168</a>, PubMed:<a href="http://www.uniprot.org/citations/30773093" target="\_blank">30773093</a>, PubMed:<a href="http://www.uniprot.org/citations/8769099" target="\_blank">8769099</a>, PubMed:<a href="http://www.uniprot.org/citations/8769099" target="\_blank">8769099</a>). Exhibits a substrate preference for proline at position P+1 and arginine at position P-3 (PubMed:<a href="http://www.uniprot.org/citations/23665168" target="\_blank">23665168</a>). Plays an important role in double-strand breaks (DSBs) repair following DNA damage (PubMed:<a href="http://www.uniprot.org/citations/31024071" target="\_blank">31024071</a>/a>). Mechanistically, phosphorylates RNF169 and increases its ability to block accumulation of TP53BP1 at the DSB sites thereby promoting homologous recombination repair (HRR) (PubMed:<a



href="http://www.uniprot.org/citations/30773093" target="\_blank">30773093</a>). 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:<a href="http://www.uniprot.org/citations/25620562" target="\_blank">25620562</a>, PubMed:<a href="http://www.uniprot.org/citations/29849146" target="\_blank">29849146</a>). May play a role in a signaling pathway regulating nuclear functions of cell proliferation (PubMed:<a href="http://www.uniprot.org/citations/14500717" target="\_blank">14500717</a>). Modulates alternative splicing by phosphorylating the splice factor SRSF6 (By similarity). Has prosurvival 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**

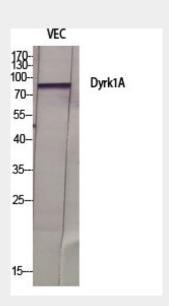
Ubiquitous. Highest levels in skeletal muscle, testis, fetal lung and fetal kidney.

### Dyrk1A Polyclonal Antibody - Protocols

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

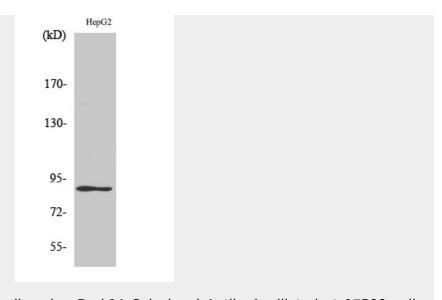
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## Dyrk1A Polyclonal Antibody - Images



Western Blot analysis of various cells using Dyrk1A Polyclonal Antibody diluted at 10500 cells nucleus extracted by Minute TM Cytoplasmic and Nuclear Fractionation kit (SC-003,Inventbiotech,MN,USA).





Western Blot analysis of HepG2 cells using Dyrk1A Polyclonal Antibody diluted at  $1 \square 500$  cells nucleus extracted by Minute TM Cytoplasmic and Nuclear Fractionation kit (SC-003,Inventbiotech,MN,USA).

## **Dyrk1A Polyclonal Antibody - Background**

Dual-specificity kinase which possesses both serine/threonine and tyrosine kinase activities. May play a role in a signaling pathway regulating nuclear functions of cell proliferation. Modulates alternative splicing by phosphorylating the splice factor SRSF6 (By similarity). Exhibits a substrate preference for proline at position P+1 and arginine at position P-3. Has pro-survival function and negatively regulates the apoptotic process. Promotes cell survival upon genotoxic stress through phosphorylation of SIRT1. This in turn inhibits TP53 activity and apoptosis (By similarity).