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Dyrk1A Polyclonal Antibody
Catalog # AP69618

Specification

Dyrk1A Polyclonal Antibody - Product Information

Application	**WB, IHC-P, IF**
Primary Accession	Q13627
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**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℃

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: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:<a

href="http://www.uniprot.org/citations/30773093" target="_blank">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}

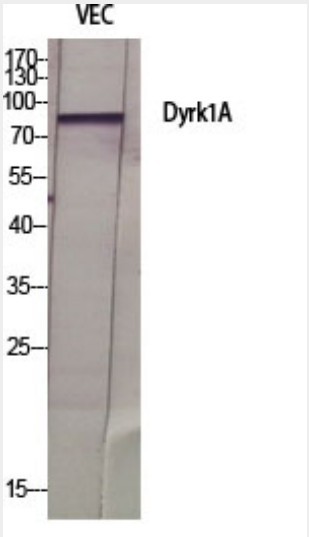
Tissue Location
Ubiquitous. Highest levels in skeletal muscle, testis, fetal lung and fetal kidney.

Dyrk1A 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 1□500 cells nucleus extracted by Minute TM Cytoplasmic and Nuclear Fractionation kit (SC-003,Inventbiotech,MN,USA).

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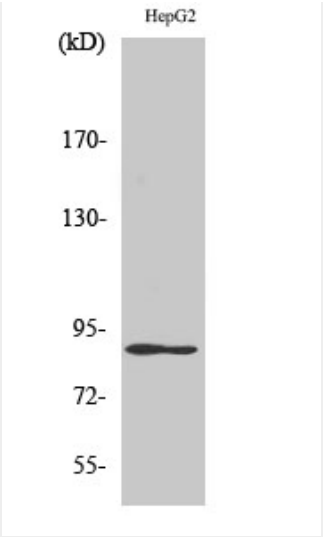

Western Blot analysis of HepG2 cells using Dyrk1A Polyclonal Antibody diluted at 1□500 cells nucleus extracted by Minute TM Cytoplasmic and Nuclear Fractionation kit (SC-003,Inventbiotech,MN,USA).

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).