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DYRK1A Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51170

Specification

DYRK1A Antibody - Product Information

Application	**WB, ICC, IHC-P, E**
Primary Accession	Q13627
Reactivity	**Human, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**90 KDa**

DYRK1A Antibody - 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

Dilution
WB~~1:1000
ICC~~N/A
IHC-P~~N/A
E~~N/A

Format
0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%

Storage
Store at -20 °C.Stable for 12 months from date of receipt

DYRK1A 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: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 - 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 Antibody - Images

DYRK1A Antibody - Background

May play a role in a signaling pathway regulating nuclear functions of cell proliferation. Phosphorylates serine, threonine and tyrosine residues in its sequence and in exogenous substrates such as CRY2, FOXO1 and SIRT1.

DYRK1A Antibody - References

Song W.J.,et al.Genomics 38:331-339(1996).
Guimera J.,et al.Hum. Mol. Genet. 5:1305-1310(1996).
Shindoh N.,et al.Biochem. Biophys. Res. Commun. 225:92-99(1996).
Ohira M.,et al.Genome Res. 7:47-58(1997).
Guimera J.,et al.Genomics 57:407-418(1999).