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Anti-DYRK1A Antibody

Catalog # AP51170

Product Information

Application	WB
Primary Accession	Q13627
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	85584

Additional Information

Gene ID	1859
Other Names	DYRK; MNB; MNBH; Dual specificity tyrosine-phosphorylation-regulated kinase 1A; Dual specificity YAK1-related kinase; HP86; Protein kinase minibrain homolog; MNBH; hMNB
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the N-term region of human DYRK1A. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000)
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

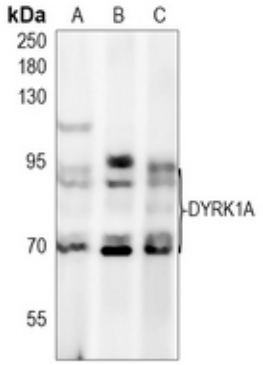
Name	DYRK1A {ECO:0000303|PubMed:25620562, ECO:0000312|HGNC:HGNC:3091}
Function	Dual-specificity kinase which possesses both serine/threonine and tyrosine kinase activities (PubMed:20981014, PubMed:21127067, PubMed:23665168, PubMed:30773093, PubMed:8769099). Exhibits a substrate preference for proline 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.

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).

Images



Western blot analysis of DYRK1A expression in THP1 (A), Hela (B), MCF7 (C) whole cell lysates. (Predicted band size: 60; 61; 66; 84; 85 kD; Observed band size: 90; 70 kD)

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.