10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Mouse Dyrk1a Antibody(C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP19429b

Product Information

Application	WB, E
Primary Accession	Q61214
Other Accession	NP_001106860.1
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB40563
Calculated MW	85494
Antigen Region	718-745

Additional Information

Gene ID	13548
Other Names	Dual specificity tyrosine-phosphorylation-regulated kinase 1A, Dual specificity YAK1-related kinase, MP86, Protein kinase minibrain homolog, MNBH, Dyrk1a, Dyrk
Target/Specificity	This Mouse Dyrk1a antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 718-745 amino acids from the C-terminal region of mouse Dyrk1a.
Dilution	WB~~1:1000 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	Mouse Dyrk1a Antibody(C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Dyrk1a
Synonyms	Dyrk

Function	Dual-specificity kinase which possesses both serine/threonine and tyrosine kinase activities (PubMed:18938227, PubMed:20123978). Exhibits a substrate preference for proline at position P+1 and arginine at position P-3 (By similarity). Plays an important role in double-strand breaks (DSBs) repair following DNA damage (By similarity). Mechanistically, phosphorylates RNF169 and increases its ability to block accumulation of TP53BP1 at the DSB sites thereby promoting homologous recombination repair (HRR) (By similarity). 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 (By similarity). May play a role in a signaling pathway regulating nuclear functions of cell proliferation (By similarity). Modulates alternative splicing by phosphorylating the splice factor SRSF6 (By similarity). Has pro- survival function and negatively regulates the apoptotic process (PubMed:20167603). Promotes cell survival upon genotoxic stress through phosphorylation of SIRT1 (PubMed:20167603). This in turn inhibits p53/TP53 activity and apoptosis (PubMed:20167603). Phosphorylates SEPTIN4, SEPTIN5 and SF3B1 at 'Thr-434' (PubMed:18938227).
Cellular Location	Nucleus speckle.
Tissue Location	Detected in brain (at protein level) (PubMed:22998443). Expressed in a variety of embryonic and adult tissues (PubMed:8975710). Expressed abundantly in neurons of the brain, spinal cord, and retina in developing embryos (PubMed:8975710) Expressed in the entorhinal, temporal and visual cortices and the hippocampus of the brain where is colocalizes with SEPTIN4 (PubMed:18938227). Expressed and extensively colocalizes with SEPTIN4 in apical dendrites of pyramidal cells (PubMed:18938227). Also expressed in Purkinje cells in the cerebellum in postnatal day 1 and adult mice (PubMed:18938227).

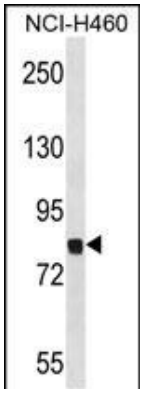
Background

Dyrk1a 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.

References

Park, J., et al. J. Biol. Chem. 285(41):31895-31906(2010)
Guo, X., et al. J. Biol. Chem. 285(17):13223-13232(2010)
Kurabayashi, N., et al. Mol. Cell. Biol. 30(7):1757-1768(2010)
Lee, Y., et al. J. Biol. Chem. 284(48):33343-33351(2009)
Noll, C., et al. PLoS ONE 4 (10), E7540 (2009) :

Images



Mouse Dyrk1a Antibody (C-term)(Cat. #AP19429b) western blot analysis in NCI-H460 cell line lysates (35ug/lane).This demonstrates the Mouse Dyrk1a antibody detected the Mouse Dyrk1a protein (arrow).

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