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Mouse Dyrk2 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14070B

Product Information

Application	WB, IHC-P, E
Primary Accession	Q5U4C9
Other Accession	NP_001014412.1
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB34467
Calculated MW	66556
Antigen Region	521-549

Additional Information

Gene ID	69181
Other Names	Dual specificity tyrosine-phosphorylation-regulated kinase 2, Dyrk2 {ECO:0000312|MGI:MGI:1330301}
Target/Specificity	This Mouse Dyrk2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 521-549 amino acids from the C-terminal region of mouse Dyrk2.
Dilution	WB~~1:8000 IHC-P~~1:100 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 Dyrk2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Dyrk2 {ECO:0000312|MGI:MGI:1330301}
Function	Serine/threonine-protein kinase involved in the regulation of the mitotic cell cycle, cell proliferation, apoptosis, organization of the cytoskeleton and neurite outgrowth. Functions in part via its role in ubiquitin-dependent

proteasomal protein degradation. Functions downstream of ATM and phosphorylates p53/TP53 at 'Ser-46', and thereby contributes to the induction of apoptosis in response to DNA damage. Phosphorylates NFATC1, and thereby inhibits its accumulation in the nucleus and its transcription factor activity. Phosphorylates EIF2B5 at 'Ser-544', enabling its subsequent phosphorylation and inhibition by GSK3B. Likewise, phosphorylation of NFATC1, CRMP2/DPYSL2 and CRMP4/DPYSL3 promotes their subsequent phosphorylation by GSK3B. May play a general role in the priming of GSK3 substrates. Inactivates GYS1 by phosphorylation at 'Ser-641', and potentially also a second phosphorylation site, thus regulating glycogen synthesis. Mediates EDVP E3 ligase complex formation and is required for the phosphorylation and subsequent degradation of KATNA1. Phosphorylates TERT at 'Ser-457', promoting TERT ubiquitination by the EDVP complex. Phosphorylates SIAH2, and thereby increases its ubiquitin ligase activity. Promotes the proteasomal degradation of MYC and JUN, and thereby regulates progress through the mitotic cell cycle and cell proliferation. Promotes proteasomal degradation of GLI2 and GLI3, and thereby plays a role in smoothened and sonic hedgehog signaling. Phosphorylates CRMP2/DPYSL2, CRMP4/DPYSL3, DCX, EIF2B5, EIF4EBP1, GLI2, GLI3, GYS1, JUN, MDM2, MYC, NFATC1, p53/TP53, TAU/MAPT and KATNA1. Can phosphorylate histone H1, histone H3 and histone H2B (in vitro). Can phosphorylate CARHSP1 (in vitro) (By similarity). Plays a role in cytoskeleton organization and neurite outgrowth via its phosphorylation of DCX.

Cellular Location

Cytoplasm. Nucleus {ECO:0000250|UniProtKB:Q92630}. Note=Translocates into the nucleus following DNA damage. {ECO:0000250|UniProtKB:Q92630}

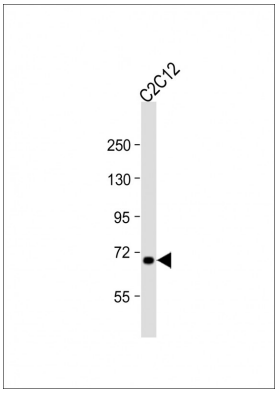
Background

Role in the regulation of cellular growth and/or development. Regulates TP53 by phosphorylation on Ser-46 to induce apoptosis in response to DNA damage, functioning downstream of ATM. Inactivates GYS1 by phosphorylation at Ser-641, and potentially also a second phosphorylation site, thus regulating glycogen synthesis. Phosphorylates EIF2B5 at Ser-544, enabling its subsequent phosphorylation and inhibition by GSK3, and may play a more general role in the priming of GSK3 substrates (By similarity).

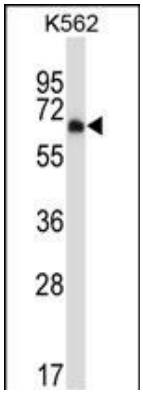
References

Guo, X., et al. J. Biol. Chem. 285(17):13223-13232(2010)
Kudo, L.C., et al. Cereb. Cortex 17(9):2108-2122(2007)
Blackshaw, S., et al. PLoS Biol. 2 (9), E247 (2004) :
Clark, A.G., et al. Science 302(5652):1960-1963(2003)
Geiger, J.N., et al. Blood 97(4):901-910(2001)

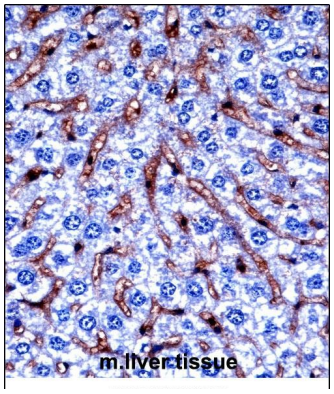
Images



Anti-Dyrk2 Antibody (C-term) at 1:8000 dilution + C2C12 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 67 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Mouse Dyrk2 Antibody (C-term) (Cat. #AP14070b) western blot analysis in K562 cell line lysates (35ug/lane).This demonstrates the Dyrk2 antibody detected the Dyrk2 protein (arrow).



Mouse Dyrk2 Antibody (C-term) (AP14070b)immunohistochemistry analysis in formalin fixed and paraffin embedded mouse liver tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of Mouse Dyrk2 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.