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Mouse Dyrk2 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14070B

Specification

Mouse Dyrk2 Antibody (C-term) - 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**
Antigen Region	**521-549**

Mouse Dyrk2 Antibody (C-term) - 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

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.

Mouse Dyrk2 Antibody (C-term) - 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}

Mouse Dyrk2 Antibody (C-term) - 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

Mouse Dyrk2 Antibody (C-term) - Images

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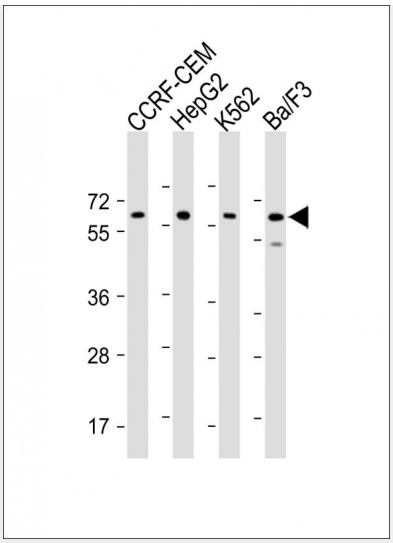
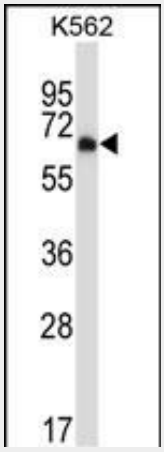
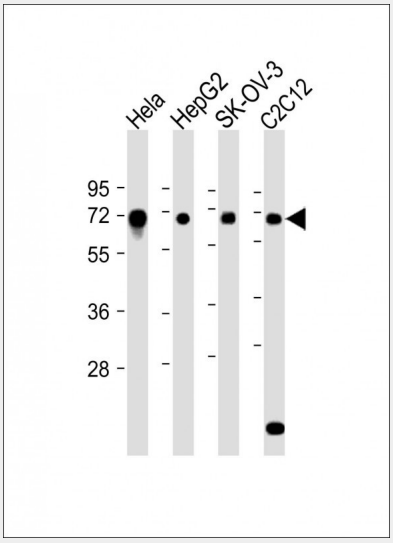


All lanes : Anti-Dyrk2 Antibody (C-term) at 1:2000 dilution Lane 1: CCRF-CEM whole cell lysate Lane 2: HepG2 whole cell lysate Lane 3: K562 whole cell lysate Lane 4: Ba/F3 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. 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).



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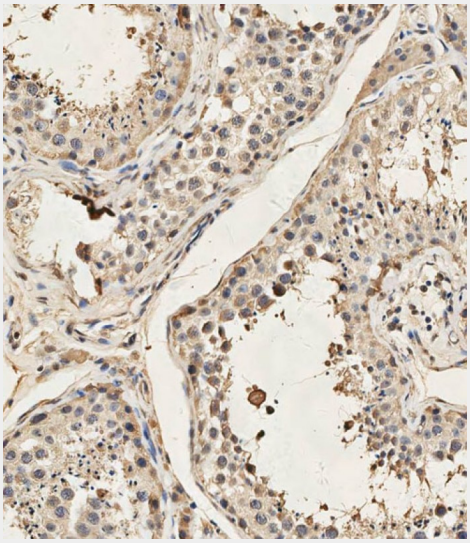
All lanes : Anti-Mouse Dyrk2 Antibody (C-term) at 1:8000 dilution Lane 1: Hela whole cell lysate Lane 2: HepG2 whole cell lysate Lane 3: SK-OV-3 whole cell lysate Lane 4: C2C12 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 67 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



AP14070b staining Dyrk2 in human testis tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Samples were incubated with primary antibody (1/100) for 1 hours at room temperature. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.

Mouse Dyrk2 Antibody (C-term) - 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).

Mouse Dyrk2 Antibody (C-term) - 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)