

DYRK2 Antibody (C-Terminus)
Rabbit Polyclonal Antibody
Catalog # ALS14817**Specification**

DYRK2 Antibody (C-Terminus) - Product Information

Application	ICC, IF, WB, IHC
Primary Accession	O92630
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	67kDa KDa

DYRK2 Antibody (C-Terminus) - Additional Information**Gene ID** 8445**Other Names**

Dual specificity tyrosine-phosphorylation-regulated kinase 2, 2.7.12.1, DYRK2

Target/Specificity

Human DYRK2. Two isoforms of DYRK2 are known to exist; this antibody will recognize both isoforms. DYRK2 antibody will not cross-react with other DYRK family members.

Reconstitution & Storage

Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles. Store undiluted.

Precautions

DYRK2 Antibody (C-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

DYRK2 Antibody (C-Terminus) - Protein Information**Name** DYRK2**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. Plays a role in cytoskeleton organization and neurite outgrowth via its phosphorylation of DCX and DPYSL2. 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).

Cellular Location

Cytoplasm. Nucleus. Note=Translocates into the nucleus following DNA damage

Tissue Location

Testis, after the onset of spermatogenesis.

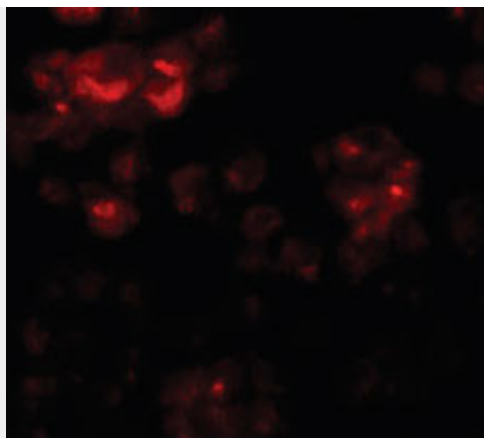
DYRK2 Antibody (C-Terminus) - Protocols

Provided below are standard protocols that you may find useful for product applications.

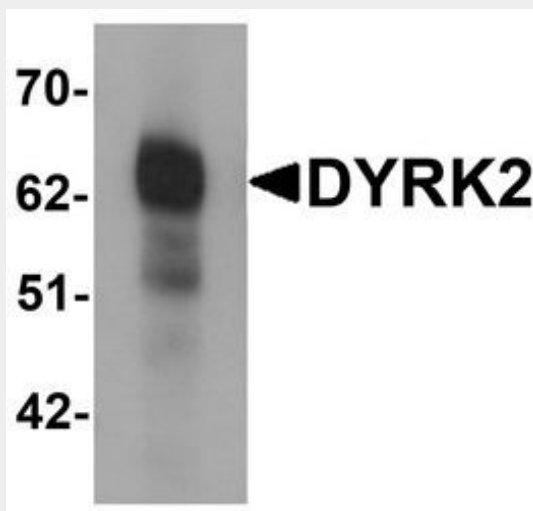
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

DYRK2 Antibody (C-Terminus) - Images

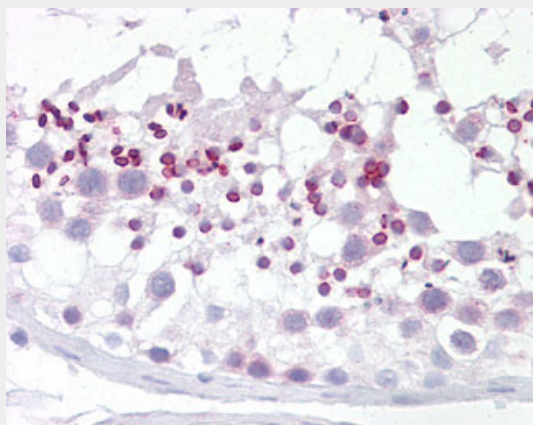
Immunocytochemistry of DYRK2 in 293 cells with DYRK2 antibody at 10 ug/ml.



Immunofluorescence of DYRK2 in 293 cells with DYRK2 antibody at 20 ug/ml.



Western blot analysis of DYRK2 in 293 cell lysate with DYRK2 antibody at (A) 1 and (B) 2 ug/ml.



Anti-DYRK2 antibody IHC of human testis.

DYRK2 Antibody (C-Terminus) - Background

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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. Plays a role in cytoskeleton organization and neurite outgrowth via its phosphorylation of DCX and DPYSL2. 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).

DYRK2 Antibody (C-Terminus) - References

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Ota T.,et al.Nat. Genet. 36:40-45(2004).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
Becker W.,et al.Submitted (NOV-1996) to the EMBL/GenBank/DDBJ databases.
Woods Y.L.,et al.Biochem. J. 355:609-615(2001).