

PRKDC (phospho T2609) polyclonal antibody

Catalog # PAB10324

Size 100 ug

Applications

Western Blot (Cell lysate)

Western blot using PRKDC (phospho T2609) polyclonal antibody (Cat # PAB10324) shows detection of a 460 KDa band corresponding to human PRKDC in various preparations.

Lane 1 : Fus1 untreated, Lane 2 : Fus1 IR (20Gy, 4h), Lane 3 : Fus1 PRKDC inhibitor + IR, Lane 4 : MO59J (DNAPK-) untreated, Lane 5 : MO59J IR, Lane 6 : Fus1 untreated, Lane 7 : Fus1 IR (20Gy, 4h), Lane 8 : Fus1 DNAPK inhibitor + IR, Lane 9 : MO59J untreated, Lane 10 : MO59J IR.

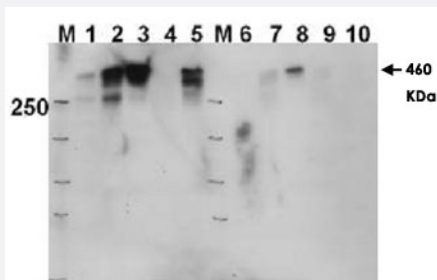
Lanes 1~5 are nuclear extract whereas lanes 6~10 are whole cell lysates. MO59J is a cell line that lacks PRKDC.

FUS1 is the matched cell line complemented with a chromosomal fragment containing the PRKDC gene.

Approximately 20 μ g of lysate was run on SDS-PAGE and transferred onto nitrocellulose, followed by reaction with a 1 : 1,000 dilution of PRKDC (phospho T2609) polyclonal antibody (Cat # PAB10324).

Detection occurred using a 1 : 5,000 dilution of HRP-labeled Goat anti-Rabbit IgG for 1 hour at room temperature.

A chemiluminescence system was used for signal detection using a 1 min exposure time.



Specification

Product Description	Rabbit polyclonal antibody raised against synthetic phosphopeptide of PRKDC.
Immunogen	Synthetic phosphopeptide corresponding to residues surrounding T2609 of human PRKDC.
Host	Rabbit
Reactivity	Chicken, Chimpanzee, Dog, Horse, Human, Rat

Specificity	This phospho-specific polyclonal antibody reacts with phosphorylated pT2609 of human DNA PKcs. Reactivity with non-phosphorylated human DNA PKcs is minimal.
Form	Liquid
Quality Control Testing	Antibody Reactive Against Synthetic Peptide.
Recommend Usage	ELISA (1:300000) Western Blot (1:500-1:2000) The optimal working dilution should be determined by the end user.
Storage Buffer	In 20 mM KH ₂ PO ₄ , 150 mM NaCl, pH 7.2 (0.01% sodium azide)
Storage Instruction	Store at 4°C. For long term storage store at -20°C. Aliquot to avoid repeated freezing and thawing.
Note	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

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- Enzyme-linked Immunoabsorbent Assay

Gene Info — PRKDC

Entrez GeneID	5591
Protein Accession#	P78527;NP_008835
Gene Name	PRKDC
Gene Alias	DNA-PKcs, DNAPK, DNPK1, HYRC, HYRC1, XRCC7, p350

Gene Description	protein kinase, DNA-activated, catalytic polypeptide
Omim ID	600899
Gene Ontology	Hyperlink
Gene Summary	The PRKDC gene encodes the catalytic subunit of a nuclear DNA-dependent serine/threonine protein kinase (DNA-PK). The second component is the autoimmune antigen Ku (MIM 152690), which is encoded by the G22P1 gene on chromosome 22q. On its own, the catalytic subunit of DNA-PK is inactive and relies on the G22P1 component to direct it to the DNA and trigger its kinase activity; PRKDC must be bound to DNA to express its catalytic properties.[supplied by OMIM]
Other Designations	hyper-radiosensitivity of murine scid mutation, complementing 1

Publication Reference

- [GSK3β negatively regulates TRAX, a scaffold protein implicated in mental disorders, for NHEJ-mediated DNA repair in neurons.](#)

Chien T, Weng YT, Chang SY, Lai HL, Chiu FL, Kuo HC, Chuang DM, Chern Y.

Molecular Psychiatry 2018 Jan; [Epub].

Application: WB, Rat, PC-12 cells

- [Proteolytic cleavage of the catalytic subunit of DNA-dependent protein kinase during poliovirus infection.](#)

Graham KL, Gustin KE, Rivera C, Kuyumcu-Martinez NM, Choe SS, Lloyd RE, Sarnow P, Utz PJ.

Journal of Virology 2004 Jun; 78(12):6313.

- [Ku70/Ku80 and DNA-dependent protein kinase catalytic subunit modulate RAG-mediated cleavage: implications for the enforcement of the 12/23 rule.](#)

Sawchuk DJ, Mansilla-Soto J, Alarcon C, Singha NC, Langen H, Bianchi ME, Lees-Miller SP, Nussenzweig MC, Cortes P.

The Journal of Biological Chemistry 2004 Jul; 279(28):29821.

- [ATM and the catalytic subunit of DNA-dependent protein kinase activate NF-kappaB through a common MEK/extracellular signal-regulated kinase/p90\(rsk\) signaling pathway in response to distinct forms of DNA damage.](#)

Panta GR, Kaur S, Cavin LG, Cortés ML, Mercurio F, Lothstein L, Sweatman TW, Israel M, Arsur M.

Molecular and Cellular Biology 2004 Mar; 24(5):1823.

Application: WB, Mouse, CHO cells

Pathway

- [Cell cycle](#)
- [Non-homologous end-joining](#)

Disease

- [Adenocarcinoma](#)
- [Ataxia telangiectasia](#)
- [Bone Neoplasms](#)
- [Brain Neoplasms](#)
- [Breast cancer](#)
- [Breast Neoplasms](#)
- [Carcinoma](#)
- [Central Nervous System Neoplasms](#)
- [DNA Damage](#)
- [Genetic Predisposition to Disease](#)
- [Glioma](#)
- [Head and Neck Neoplasms](#)
- [Hematologic Diseases](#)
- [Hodgkin Disease](#)
- [Kidney Neoplasms](#)
- [Lung Neoplasms](#)
- [Lymphoma](#)
- [Lymphoproliferative Disorders](#)
- [Multiple Sclerosis](#)
- [Neoplasms](#)
- [Occupational Diseases](#)
- [Prostate cancer](#)

- [Prostatic Neoplasms](#)
- [Thyroid Neoplasms](#)
- [Tobacco Use Disorder](#)
- [Urinary Bladder Neoplasms](#)
- [Waldenstrom Macroglobulinemia](#)
- [Werner syndrome](#)