

Datasheet for ABIN129603  
**anti-PRKDC antibody (pThr2609)**[2 Images](#)[5 Publications](#)[Go to Product page](#)

## Overview

Quantity:	100 µg
Target:	PRKDC
Binding Specificity:	pThr2609
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This PRKDC antibody is un-conjugated
Application:	ELISA, Western Blotting (WB), Immunoprecipitation (IP)

## Product Details

Immunogen:	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids surrounding Thr 2609 of human DNA PKcs.
Isotype:	IgG
Cross-Reactivity:	Chimpanzee
Characteristics:	Concentration Definition: by UV absorbance at 280 nm

## Target Details

Target:	PRKDC
Alternative Name:	DNA PKcs ( <a href="#">PRKDC Products</a> )

## Target Details

Background:	<p>DNA dependent Protein Kinase (also called DNAPK, DNP1, HYRC1, Protein Kinase DNA Activated Catalytic Polypeptide, XRCC7 and p460) consists of the 460 kDa DNA PKcs and a heterodimeric regulatory complex comprised of p70 Ku and p80 Ku (Ku autoantigen). DNA PKcs is a nuclear protein serine/threonine kinase present in a wide variety of eukaryotic species. DNA PKcs phosphorylates transcription factors, Sp1, Oct-1, p53 and SV40 large T antigen. DNA PKcs is involved in repairing double stranded DNA breaks. At the onset of apoptosis, DNA PKcs is rapidly inactivated by cleavage of the catalytic subunit into smaller polypeptides. Proteolysis of DNA PKcs is inhibited by the cysteine protease inhibitors iodoacetamide and N-ethylmaleimide. Alternative splicing can occur for this protein to produce at least two isoforms.</p> <p>Synonyms: DNA dependent protein kinase catalytic subunit antibody, DNA PK catalytic subunit antibody, DNAPK antibody, DNAPK catalytic subunit antibody, DNP1 antibody, DNP1 antibody, HYRC 1 antibody</p>
Gene ID:	5591, 13654237
UniProt:	<a href="#">P78527</a>
Pathways:	<a href="#">DNA Damage Repair</a> , <a href="#">Production of Molecular Mediator of Immune Response</a>

## Application Details

Application Notes:	<p>This affinity purified antibody has been tested for use in ELISA and by western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 460 kDa in size corresponding to DNA PKcs by western blotting in the appropriate cell lysate or extract. Alternate splice variants have been described for this protein. Best western blotting results are seen when IP is performed prior to detection. This antibody detects an inducible signal at the correct height after DNA damage. However, the antibody may also detect an IR-inducible signal in cells lacking DNA PKcs (M059J cells) at the same size as DNA PKcs if western blotting is performed directly. We believe that this additional band is 53BP1 that runs at the same size as DNA PKcs and is also phosphorylated in an IR-dependent manner. Similar results were seen with another phospho DNA PKcs antibody indicating that this result is general to antibodies to this phospho site, rather than specific to this antibody.</p>
Restrictions:	For Research Use only

## Handling

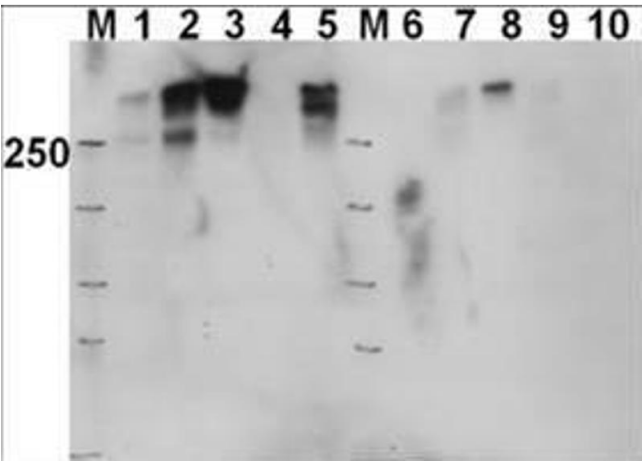
Format:	Liquid
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## Handling

Concentration:	0.93 mg/mL
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	Sodium azide
Precaution of Use:	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C

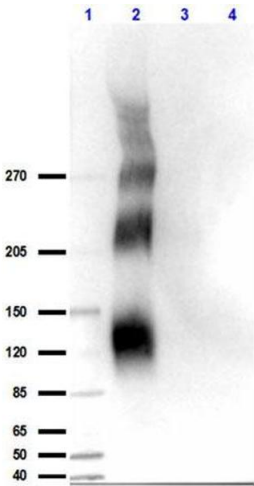
## Publications

- Product cited in:
- Lee, Taylor, Barnes, Shen, Stewart, Chen, Xiang, Bao, Shen: "A Myt1 family transcription factor defines neuronal fate by repressing non-neuronal genes." in: **eLife**, Vol. 8, (2020) ([PubMed](#)).
- Wen, Gao, Wang, Ray, Magnuson, Wright, Di Magliano, Frankel, Crawford: "Myeloid Cell-Derived HB-EGF Drives Tissue Recovery After Pancreatitis." in: **Cellular and molecular gastroenterology and hepatology**, Vol. 8, Issue 2, pp. 173-192, (2019) ([PubMed](#)).
- Wang, Vukovic, Koh, Schulten, Myong: "Dynamic profiling of double-stranded RNA binding proteins." in: **Nucleic acids research**, Vol. 43, Issue 15, pp. 7566-76, (2015) ([PubMed](#)).
- Lu, Tremblay, King, Qi, Reynolds, Marker, Varrone, Majewska, Dewhurst, Gelbard: "HIV-1 Tat-induced microgliosis and synaptic damage via interactions between peripheral and central myeloid cells." in: **PLoS ONE**, Vol. 6, Issue 9, pp. e23915, (2011) ([PubMed](#)).
- Zangar, Daly, White, Servoss, Tan, Collett: "ProMAT calibrator: A tool for reducing experimental bias in antibody microarrays." in: **Journal of proteome research**, Vol. 8, Issue 8, pp. 3937-43, (2009) ([PubMed](#)).



#### Western Blotting

**Image 1.** Western blot using Affinity Purified anti-DNAPKcs antibody shows detection of a 460 kDa band corresponding to human DNAPKcs in various preparations. Lane 1: Fus1 untreated, Lane 2: Fus1 IR (20Gy, 4h), Lane 3: Fus1 DNAPK 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 DNA-PKcs. FUS1 is the matched cell line complemented with a chromosomal fragment containing the DNA-PKcs gene. Approximately 20 µg of lysate was run on SDS-PAGE and transferred onto nitrocellulose, followed by reaction with a 1:1,000 dilution of anti-DNAPKcs antibody. 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 (Roche) using a 1 min exposure time.



#### Western Blotting

**Image 2.** Western Blot results of Rabbit Anti-DNA Pkcs pT609 Antibody. Lane 1: Opal Prestained Molecular Weight Ladder . Lane 2: DNA Pkc phosphor control. Lane 3: DNA Pkc control. Lane 4: BSA. Load: 10µg. Primary Antibody: Rabbit Anti-DNA Pkcs pT609 at 1µg/mL overnight at 4°C. Secondary Antibody: Goat anti-Rabbit HRP at 1:70,000 for 30min at RT. Blocking: BlockOut for 30 min at RT.