For Research Use Only

DNA-PKcs Polyclonal antibody

Catalog Number:19983-1-AP 25 Publications

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Basic Information

Catalog Number:
19983-1-AP

Size:
150ul , Concentration: 700 ug/ml by Nanodrop;

Source:
Rabbit

Isotype:
IgG

GenBank Accession Number:
NM_006904

GeneID (NCBI):
5591

UNIPROT ID:
P78527

Full Name:
protein kinase, DNA-activated, catalytic polypeptide

Calculated MW:
469 kDa

Observed MW:
350-460 kDa

Purification Method:
Antigen affinity purification

Recommended Dilutions:
WB: 1:500-1:3000
IP: 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate

Applications

Tested Applications:
WB, IP, ELISA

Cited Applications:
WB, IHC, IF, CoIP

Species Specificity:
human

Cited Species:
human, mouse, rat

Positive Controls:

WB : HeLa cells, MCF-7 cells

IP : HeLa cells,

Background Information

PRKDC, also named as HYRC, HYRC1, DNPK1 and p460, belongs to the PI3/PI4-kinase family. PRKDC is a serine/threonine-protein kinase that acts as a molecular sensor for DNA damage. Involved in DNA nonhomologous end joining (NHEJ), PRKDC is required for double-strand break (DSB) repair and V(D)J recombination. PRKDC must be bound to DNA to express its catalytic properties. It promotes processing of hairpin DNA structures in V(D)J recombination by activation of the hairpin endonuclease artemis (DCLRE1C). It is required to protect and align broken ends of DNA. PRKDC may also act as a scaffold protein to aid the localization of DNA repair proteins to the site of damage. It is found at the ends of chromosomes, suggesting a further role in the maintenance of telomeric stability and the prevention of chromosomal end fusion. It also involved in modulation of transcription. It recognizes the substrate consensus sequence [ST]-Q. PRKDC phosphorylates 'Ser-139' of histone variant H2AX/H2AFX, thereby regulating DNA damage response mechanism. It phosphorylates DCLRE1C, c-Abl/ABL1, histone H1, HSPCA, c-jun/JUN, p53/TP53, PARP1, POU2F1, DHX9, SRF, XRCC1, XRCC1, XRCC4, XRCC5, XRCC6, WRN, c-myc/MYC and RFA2. The antibody recognizes the C-term of PRKDC.

Notable Publications

Author	Pubmed ID	Journal	Application
Hong-Yu Tao	36435475	Int J Biol Macromol	WB
Xing Ren	29168129	Hum Cell	WB
Zongpei Guo	32457294	Cell Death Dis	WB

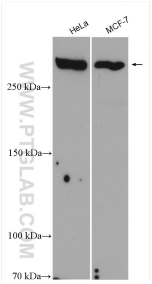
Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol, pH7.3
Aliquoting is unnecessary for -20°C storage

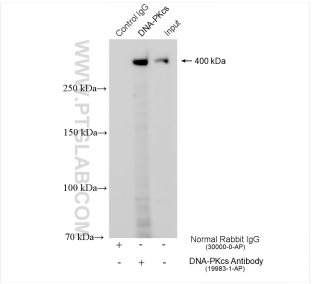
*** 20ul sizes contain 0.1% BSA

For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
W: ptglab.com

Selected Validation Data



Various lysates were subjected to SDS PAGE followed by western blot with 19983-1-AP (DNA-PKcs antibody) at dilution of 1:1500 incubated at room temperature for 1.5 hours.



IP result of anti-DNA-PKcs (IP:19983-1-AP, 4ug; Detection:19983-1-AP 1:500) with HeLa cells lysate 1320 ug.