

Datasheet: AHP318

Description:	RABBIT ANTI DNA PKcs
Specificity:	DNA PKcs
Format:	Serum
Product Type:	Polyclonal Antibody
Isotype:	Polyclonal IgG
Quantity:	0.1 ml

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			•	
Immunohistology - Frozen			•	
Immunohistology - Paraffin (1)	-			1/100
ELISA			•	
Immunoprecipitation	-			
Western Blotting	-			1/2000
Gel Super Shift Assays	-			

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

(1)This product requires heat mediated treatment of paraffin sections. Bio-Rad recommend the use of antigen unmasking fluid for this purpose. A two hour incubation with AHP318 is recommended.

Target Species	Human	
Species Cross Reactivity	Reacts with: Hamster, Mouse, Rat N.B. Antibody reactivity and working conditions may vary between sp	pecies.
Product Form	Serum - liquid	
Antiserum Preparation	Antisera to DNA-PKcs were raised by repeated immunisation of rabb Whole serum is supplied.	it with highly purified antigen.
Preservative Stabilisers	0.09% Sodium Azide	
Immunogen	Human DNA-PKcs fragment.	
External Database Links	UniProt:	

P78527 Related reagents

Entrez Gene:

5591 PRKDC Related reagents

Synonyms

HYRC, HYRC1

Specificity

Rabbit anti DNA PKcs antibody recognizes the human DNA-dependent protein kinase catalytic subunit, also known as DNA-PKcs, DNPK1 or p460. DNA PKcs is a 4128 amino acid ~460 kDa nuclear protein encoded by the PRKDC gene, acting as a molecular sensor for DNA damage. Mutation of the PRKDC gene can result in Immunodeficiency 26 with or without neurologic abnormalities (IMD26) (van der Burg et al. 2009).

References

- 1. Finnie, N.J. *et al.* (1995) DNA-dependent protein kinase activity is absent in xrs-6 cells: implications for site-specific recombination and DNA double-strand break repair. <u>Proc Natl Acad Sci</u> U S A. 92 (1): 320-4.
- 2. Jayaram, S. *et al.* (2008) E1B 55k-independent dissociation of the DNA ligase IV/XRCC4 complex by E4 34k during adenovirus infection. Virology.382: 163-70.
- 3. Hoek, M. *et al.* (2011) An analysis of CAF-1-interacting proteins reveals dynamic and direct interactions with the KU complex and 14-3-3 proteins. J Biol Chem. 286 (12): 10876-87.
- 4. Frasca, D. *et al.* (2001) Role of DNA-dependent protein kinase in recognition of radiation-induced DNA damage in human peripheral blood mononuclear cells. Int Immunol. 13: 791-7.
- 5. Jayaram, S. *et al.* (2008) Loss of DNA ligase IV prevents recognition of DNA by double-strand break repair proteins XRCC4 and XLF. Nucleic Acids Res. 36: 5773-86.
- 6. Koike, M. *et al.* (1999) Differential subcellular localization of DNA-dependent protein kinase components Ku and DNA-PKcs during mitosis. J Cell Sci. 112: 4031-9.
- 7. Yee, M.C. *et al.* (2005) A cell-permeable, activity-based probe for protein and lipid kinases. <u>J Biol</u> Chem. 280: 29053-9.
- 8. Zhao, H.J. *et al.* (2000) DNA-dependent protein kinase activity correlates with Ku70 expression and radiation sensitivity in esophageal cancer cell lines. Clin Cancer Res. 6: 1073-8.
- 9. Sirzen, F. *et al.* (1999) DNA-dependent protein kinase content and activity in lung carcinoma cell lines: correlation with intrinsic radiosensitivity. Eur J Cancer. 35: 111-6.
- 10. Frasca, D. *et al.* (2002) The DNA repair protein ku is involved in gp130-mediated signal transduction events in PBMC from young but not from elderly subjects. Exp Gerontol. 37: 321-8.
- 11. Scarpaci, S. *et al.* (2003) DNA damage recognition and repair capacities in human naïve and memory T cells from peripheral blood of young and elderly subjects. <u>Mech Ageing Dev. 124:</u> 517-24.
- 12. Kamachi, M. *et al.* (2002) Human autoimmune sera as molecular probes for the identification of an autoantigen kinase signaling pathway. <u>J Exp Med. 196: 1213-25.</u>
- 13. Gaymes, T.J. *et al.* (2006) Histone deacetylase inhibitors (HDI) cause DNA damage in leukemia cells: a mechanism for leukemia-specific HDI-dependent apoptosis? <u>Mol Cancer Res. 4 (8): 563-73.</u>
- 14. Koike, M. *et al.* (1999) Differential subcellular localization of DNA-dependent protein kinase components Ku and DNA-PKcs during mitosis. <u>J Cell Sci. 112 (Pt 22): 4031-9.</u>
- 15. Nilsson, A. *et al.* (1999) Cell cycle-dependent regulation of the DNA-dependent protein kinase. Cell Prolif. 32 (4): 239-48.
- 16. Yumoto Y *et al.* (1998) High mobility group proteins 1 and 2 can function as DNA-binding regulatory components for DNA-dependent protein kinase *in vitro*. J Biochem. 124 (3): 519-27.

Storage

Store at +4°C or at -20°C if preferred.

This product should be stored undiluted.

Storage in frost free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the protein. Should this product contain a precipitate we recommend microcentrifugation before use.

Shelf Life	18 months from date of despatch.
Health And Safety Information	Material Safety Datasheet documentation available at: Material Safety Datasheet Documentation #10081 available at: https://www.bio-rad-antibodies.com/uploads/MSDS/10081.pdf
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Sheep Anti Rabbit IgG (STAR34...) **FITC** Sheep Anti Rabbit IgG (STAR35...) **RPE** Goat Anti Rabbit IgG (H/L) (STAR124...) HRP

Goat Anti Rabbit IgG (Fc) (STAR121...) Biotin, FITC, HRP

Sheep Anti Rabbit IgG (2AB02...) **Biotin**

Sheep Anti Rabbit IgG (STAR36...) DyLight®488, DyLight®549, DyLight®649,

DyLight®680, DyLight®800

Recommended Useful Reagents

TidyBlot™ WESTERN BLOT DETECTION REAGENT:HRP (STAR209P)

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