Datasheet: AHP318

BATCH NUMBER 161516

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 species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

Product Form

Serum - liquid

Antiserum Preparation	Antisera to DNA-PKcs were raised by repeated immunisation of rabbit with highly purified antigen. Whole serum is supplied.
Preservative Stabilisers	<0.1% Sodium Azide (NaN_3)
Immunogen	Human DNA-PKcs fragment.
External Database Links	**UniProt:** P78527 Related reagents **Entrez Gene:** 5591 PRKDC Related reagents
Synonyms	HYRC, HYRC1
RRID	AB_322027
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. Proc Natl Acad Sci 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. J Biol 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. Mech Ageing Dev. 124: 517-24.
12. Kamachi, M. *et al.* (2002) Human autoimmune sera as molecular probes for the identification of an autoantigen kinase signaling pathway. J Exp Med. 196: 1213-25.
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? Mol Cancer Res. 4 (8): 563-73.
14. Koike, M. *et al.* (1999) Differential subcellular localization of DNA-dependent protein kinase components Ku and DNA-PKcs during mitosis. J Cell Sci. 112 (Pt 22): 4031-9.
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	This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C. Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.
Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #10081 available at: https://www.bio-rad-antibodies.com/SDS/AHP318 10081
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Rabbit IgG (H/L) (STAR124...)	HRP
Sheep Anti Rabbit IgG (STAR35...)	RPE
Goat Anti Rabbit IgG (Fc) (STAR121...)	Biotin, FITC, HRP

Recommended Useful Reagents

TidyBlot WESTERN BLOT DETECTION REAGENT:HRP (STAR209P)

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