

## Product datasheet for **AP20223PU-N**

### DNA PKcs (PRKDC) Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	IHC
Recommended Dilution:	<b>Immunohistochemistry on paraffin sections:</b> 1/50-1/200.
Reactivity:	Human, Mouse
Host:	Rabbit
Clonality:	Polyclonal
Specificity:	This antibody detects endogenous levels of DNA-PK protein.
Formulation:	Phosphate buffered saline (PBS) with 0.05% sodium azide, approx. pH 7.2. State: Aff - Purified State: Liquid purified Ig fraction
Concentration:	1.0 mg/ml
Purification:	Affinity-chromatography using epitope-specific immunogen and the purity is > 95% (by SDS-PAGE)
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Predicted Protein Size:	~ 450 kDa
Gene Name:	protein kinase, DNA-activated, catalytic polypeptide
Database Link:	<a href="#">Entrez Gene 19090 Mouse</a> <a href="#">Entrez Gene 5591 Human</a> <a href="#">P78527</a>



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**Background:**

The phosphatidylinositol kinase (PIK) family members fall into two distinct subgroups. The first subgroup contains proteins such as the PI 3- and PI 4-kinases and the second group comprises the PIK-related kinases. The PIK-related kinases include Atm, DNA-PKCS and FRAP. These proteins have in common a region of homology at their carboxy termini that is not present in the PI 3- and PI 4-kinases. All of the members of the PIK-related kinases are also over 270 kDa. The Atm gene is mutated in the autosomal recessive disorder ataxia telangiectasia (AT) that is characterized by cerebellar degeneration (ataxia) and the appearance of dilated blood vessels (telangiectases) in the conjunctivae of the eyes. AT cells are hypersensitive to ionizing radiation, impaired in mediating the inhibition of DNA synthesis and they display delays in p53 induction. DNA-PK is a heterotrimeric DNA binding enzyme that is composed of a large subunit, DNA-PKCS, and two smaller subunits collectively known as Ku. The loss of DNA-PK leads to defects in DSB repair and V(D)J recombination. FRAP can autophosphorylate on serine and bind to rapamycin/FKBP. FRAP is also an upstream regulator of S6 kinase and has been implicated in the regulation of p27 and p21 expression.

**Synonyms:**

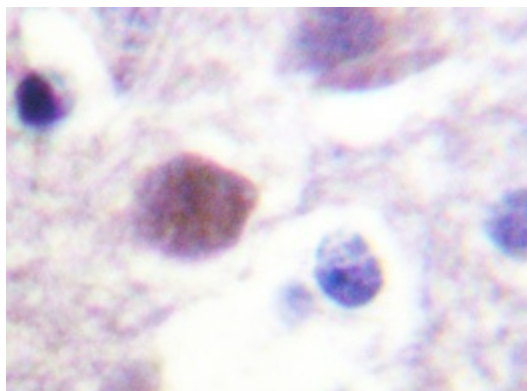
DNPK1, p460, HYRC, HYRC1

**Protein Families:**

Druggable Genome, Protein Kinase

**Protein Pathways:**

Cell cycle, Non-homologous end-joining

**Product images:**


Immunohistochemistry analyzes of DNA-PK antibody (Cat.-No.: AP20223PU-N) in paraffin-embedded human brain tissue.