

## Immunotag™ Phospho-DNA-PK (Thr2647) Antibody

Antibody Specification	
Catalog No.	ITA1129
Product Description	Immunotag™ Phospho-DNA-PK (Thr2647) Antibody
Size	100 µg, 200 µg
Conjugation	HRP, Biotin, FITC, Alexa Fluor® 350, Alexa Fluor® 405, Alexa Fluor® 488, Alexa Fluor® 555, Alexa Fluor® 594, Alexa Fluor® 647
IMPORTANT NOTE	This product is custom manufactured with a lead time of 3-4 weeks. Once in production, this item cannot be cancelled from an order and is not eligible for return.
Target Protein	Phospho-DNA-PK (Thr2647)
Clonality	Polyclonal
Storage/Stability	-20°C/1 year
Application	IHC,IF/ICC,ELISA
Recommended Dilution	IHC 1:50-1:200 IF/ICC 1:100-1:500
Concentration	1 mg/ml
Reactive Species	Human
Host Species	Rabbit
Immunogen	A synthesized peptide derived from human DNA-PK around the phosphorylation site of Threonine 2647
Specificity	Phospho-DNA-PK (Thr2647) Antibody detects endogenous levels of DNA-PK only when phosphorylated at Threonine 2647
Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho- and non-phospho-peptide affinity columns.
Form	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.Store at -20 °C.Stable for 12 months from date of receipt
Gene Name	PRKDC
Accession No.	P78527

## Antibody Specification

Alternate Names	DNA dependent protein kinase catalytic subunit; DNA PK catalytic subunit; DNA-dependent protein kinase catalytic subunit; DNA-PK catalytic subunit; DNA-PKcs; DNAPK; DNAPK catalytic subunit; DNP1; DNP1; Hyper radiosensitivity of murine scid mutation, complementing 1; Hyperradiosensitivity complementing 1, mouse, homolog of 1; HYRC 1; HYRC; HYRC1; IMD26; p350; p460; PKRDC; PRKDC; PRKDC_HUMAN; Protein Kinase DNA Activated Catalytic Polypeptide; XRCC 7; XRCC7;
Description	Serine/threonine-protein kinase that acts as a molecular sensor for DNA damage. Involved in DNA non-homologous end joining (NHEJ) required for double-strand break (DSB) repair and V(D)J recombination. Must be bound to DNA to express its catalytic properties. Promotes processing of hairpin DNA structures in V(D)J recombination by activation of the hairpin endonuclease artemis (DCLRE1C). The assembly of the DNA-PK complex at DNA ends is also required for the NHEJ ligation step. Required to protect and align broken ends of DNA. May also act as a scaffold protein to aid the localization of DNA repair proteins to the site of damage. Found at the ends of chromosomes, suggesting a further role in the maintenance of telomeric stability and the prevention of chromosomal end fusion. Also involved in modulation of transcription. Recognizes the substrate consensus sequence [ST]-Q. Phosphorylates 'Ser-139' of histone variant H2AX/H2AFX, thereby regulating DNA damage response mechanism. Phosphorylates DCLRE1C, c-Abl/ABL1, histone H1, HSPCA, c-jun/JUN, p53/TP53, PARP1, POU2F1, DHX9, SRF, XRCC1, XRCC1, XRCC4, XRCC5, XRCC6, WRN, MYC and RFA2. Can phosphorylate C1D not only in the presence of linear DNA but also in the presence of supercoiled DNA. Ability to phosphorylate p53/TP53 in the presence of supercoiled DNA is dependent on C1D. Contributes to the determination of the circadian period length by antagonizing phosphorylation of CRY1 'Ser-588' and increasing CRY1 protein stability, most likely through an indirect mechanism. Interacts with CRY1 and CRY2; negatively regulates CRY1 phosphorylation. Plays a role in the regulation of DNA virus-mediated innate immune response by assembling into the HDP-RNP complex, a complex that serves as a platform for IRF3 phosphorylation and subsequent innate immune response activation through the cGAS-STING pathway.
Cell Pathway/ Category	Primary Polyclonal Antibody
Protein MW	470kDa
Usage	For Research Use Only! Not for diagnostic or therapeutic procedures.