Datasheet for ABIN5710145

PRKDC Protein (AA 3747-4015) (His tag)

Go to Product page

1 Image

Overview

Quantity:	100 µg
Target:	PRKDC
Protein Characteristics:	AA 3747-4015
Origin:	Mouse
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Purification tag / Conjugate:	This PRKDC protein is labelled with His tag.
Application:	SDS-PAGE (SDS)

Product Details

Sequence:	EYPFLVKGGE DLRQDQRIEQ IFEVMNAILS QDAACSQRNM QLRTYRVVPM TSRLGLIEWI ENTMTLKDLL LSNMSQEEKV ANNSDPKAPI RDYKDWLMKV SGKSDAGAYV LMYSRANRTE TVVAFRRRES QVPPDLLKRA FVKMSTSPEA FLALRSHFAS SHALLCISHW LLGIGDRHLN NFMVAMETGS VIGIDFGHAF GSATQFLPVP ELMPFRLTRQ FVSLMLPMKE TGLMCTVMVH ALRAFRSCAG LLTDTMEIFV KEPSFDWKS
Purification:	SDS-PAGE
Purity:	> 90 %

Target Details

Target:	PRKDC
Alternative Name:	PRKDC (PRKDC Products)

Target Details

Background:	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 artis (DCLRE1C). The assbly 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, C1D, c-Abl/ABL1, histone H1, HSPCA, c-jun/JUN, p53/TP53, PARP1, POU2F1, DHX9, SRF, 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 machanism.
Molecular Weight:	34.7 kDa
UniProt:	P97313
Pathways:	DNA Damage Repair, Production of Molecular Mediator of Immune Response

Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Restrictions:	For Research Use only

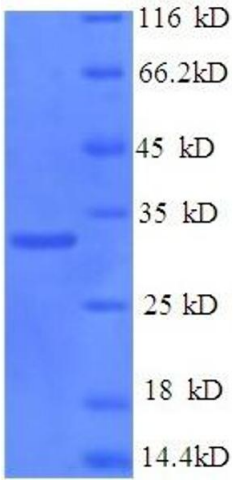
Handling

Format:	Liquid
Concentration:	0.1-2 mg/mL
Buffer:	20 mM Tris-HCl based buffer, pH 8.0
Storage:	-80 °C,4 °C,-20 °C
Storage Comment:	Store at -20°C, for extended storage, conserve at -20°C or -80°C. Repeated freezing and thawing

Handling

is not recommended. Store working aliquots at 4°C for up to one week.

Images



SDS-PAGE
Image 1.