Recombinant Mouse DNA-dependent protein kinase catalytic subunit(Prkdc),partial

Catalog No: #AP70661

Package Size: #AP70661-1 20ug #AP70661-2 100ug #AP70661-3 1mg

Signalway Antibody
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Support: tech@signalwayantibody.com

Description

Product Name	Recombinant Mouse DNA-dependent protein kinase catalytic subunit(Prkdc),partial
Host Species	E.coli
Purification	Greater than 90% as determined by SDS-PAGE.
Immunogen Description	Expression Region:3747-4015aaSequence Info:Partial
Other Names	p460
Accession No.	P97313
Calculated MW	34.6 kDa
Tag Info	N-terminal 6xHis-tagged
Target Sequence	EYPFLVKGGEDLRQDQRIEQIFEVMNAILSQDAACSQRNMQLRTYRVVPMTSRLGLIEWIENTMTLKDLLLSN MSQEEKVANNSDPKAPIRDYKDWLMKVSGKSDAGAYVLMYSRANRTETVVAFRRRESQVPPDLLKRAFVKM STSPEAFLALRSHFASSHALLCISHWLLGIGDRHLNNFMVAMETGSVIGIDFGHAFGSATQFLPVPELMPFRLT RQFVSLMLPMKETGLMCTVMVHALRAFRSCAGLLTDTMEIFVKEPSFDWKS
Formulation	Tris-based buffer50% glycerol
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C,-80°C. The shelf life of lyophilized form is 12 months at -20°C,-80°C.Notes:Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.

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.

References

Phosphorylation of the cryptochrome 1 C-terminal tail regulates circadian period length.Gao P., Yoo S.H., Lee K.J., Rosensweig C., Takahashi J.S., Chen B.P., Green C.B.J. Biol. Chem. 288:35277-35286(2013) Research Topic:Others

Note: This product is for in vitro research use only and is not intended for use in humans or animals.