

Product datasheet for **SR423679**

Prkdc Mouse siRNA Oligo Duplex (Locus ID 19090)

Product data:

Product Type:	siRNA Oligo Duplexes
Purity:	HPLC purified
Quality Control:	Tested by ESI-MS
Sequences:	Available with shipment
Stability:	One year from date of shipment when stored at -20°C.
# of transfections:	Approximately 330 transfections/2nmol in 24-well plate under optimized conditions (final conc. 10 nM).
Note:	Single siRNA duplex (10nmol) can be ordered.
RefSeq:	NM_011159
UniProt ID:	P97313
Synonyms:	AI326420; AU019811; DNA-PKcs; DNAPDcs; DNAPK; DNP1; DOXNPH; dxnph; HYRC1; p460; scid; slip
Components:	Prkdc (Mouse) - 3 unique 27mer siRNA duplexes - 2 nmol each (Locus ID 19090) Included - SR30004, Trilencer-27 Universal Scrambled Negative Control siRNA Duplex - 2 nmol Included - SR30005, RNase free siRNA Duplex Resuspension Buffer - 2 ml



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Summary:

Serine/threonine-protein kinase that acts as a molecular sensor for DNA damage (By similarity). Involved in DNA non-homologous end joining (NHEJ) required for double-strand break (DSB) repair and V(D)J recombination (By similarity). Must be bound to DNA to express its catalytic properties (By similarity). Promotes processing of hairpin DNA structures in V(D)J recombination by activation of the hairpin endonuclease artemis (DCLRE1C) (By similarity). The assembly of the DNA-PK complex at DNA ends is also required for the NHEJ ligation step (By similarity). Required to protect and align broken ends of DNA (By similarity). May also act as a scaffold protein to aid the localization of DNA repair proteins to the site of damage (By similarity). Found at the ends of chromosomes, suggesting a further role in the maintenance of telomeric stability and the prevention of chromosomal end fusion (PubMed:12426399). Also involved in modulation of transcription (By similarity). Recognizes the substrate consensus sequence [ST]-Q (By similarity). Phosphorylates 'Ser-139' of histone variant H2AX/H2AFX, thereby regulating DNA damage response mechanism (By similarity). Phosphorylates DCLRE1C, C1D, c-Abl/ABL1, histone H1, HSPCA, c-jun/JUN, p53/TP53, PARP1, POU2F1, DHX9, FH, SRF, XRCC1, XRCC4, XRCC5, XRCC6, WRN, MYC and RFA2 (By similarity). Can phosphorylate C1D not only in the presence of linear DNA but also in the presence of supercoiled DNA (By similarity). Ability to phosphorylate p53/TP53 in the presence of supercoiled DNA is dependent on C1D (By similarity). 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 (PubMed:24158435). 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 (By similarity).[UniProtKB/Swiss-Prot Function]

Performance Guaranteed:

OriGene guarantees that at least two of the three Dicer-Substrate duplexes in the kit will provide at least 70% or more knockdown of the target mRNA when used at 10 nM concentration by quantitative RT-PCR when the TYE-563 fluorescent transfection control duplex (cat# SR30002) indicates that >90% of the cells have been transfected and the HPRT positive control (cat# SR30003) provides 90% knockdown efficiency.

For non-conforming siRNA, requests for replacement product must be made within ninety (90) days from the date of delivery of the siRNA kit. To arrange for a free replacement with newly designed duplexes, please contact Technical Services at techsupport@origene.com. Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled siRNA control (quantitative RT-PCR data required).