Recombinant PRKDC protein (His tag)

Catalog Number	542499
Synonyms	DNA-PK catalytic subunit; DNA-PKcs; DNPK1; Ser-473 kinase; S473K; p460
Species	Human
Expression System	E. coli
Accession	P78527
Molecular Weight	Predictes a molecular mass of 23.29 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 23 kDa band.

Product Information

Sequence Region	614-800
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 614-800 aa (P78527) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human DNA-PKcs Fragment (614-800) is a high-quality, soluble protein fragment derived from the DNA-dependent protein kinase catalytic subunit (DNA-PKcs), a key regulator in DNA damage response and repair. This fragment is ideal for structural studies, biochemical assays, and functional investigations into DNA-PKcs activity. DNA-PKcs, encoded by the PRKDC gene, is a serine/threonine-protein kinase that serves as a critical molecular sensor for DNA double-strand breaks. It plays a central role in non-homologous end joining (NHEJ), a pathway essential for DNA repair and V(D)J recombination. Beyond its DNA repair functions, DNA-PKcs modulates transcription, contributes to ribosome assembly by processing precursor rRNA, and regulates innate immune responses via the cGAS-STING pathway. The full-length protein is primarily localized in the nucleus, including nucleoli, with some presence in the cytosol. The fragment (residues 614-800) was selected for its stability and solubility, enabling focused research on this pivotal kinase's mechanisms.