

## PNKP Protein, Human (His-SUMO)

<b>Cat. No.:</b>	HY-P71620
<b>Synonyms:</b>	2''(3'')-polynucleotidase; 2'(3')-polynucleotidase; Bifunctional polynucleotide phosphatase/kinase; DEM 1; DEM1; Polynucleotide kinase-3''-phosphatase
<b>Species:</b>	Human
<b>Source:</b>	E. coli
<b>Accession:</b>	Q96T60 (1M-521G)
<b>Gene ID:</b>	11284
<b>Molecular Weight:</b>	Approximately 70 kDa

### PROPERTIES

#### AA Sequence

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MGEVEAPGRL   WLESPPGGAP   PIFLPSDGQA   LVLGRGPLTQ
VTDRKCSRTQ   VELVADPETR   TVAVKQLGVN   PSTTGTQELK
PGLLEGLGVG   DTLYLVNGLH   PLTLRWEETR   TPESQPDTTP
GTPPLVSQDEK   RDAELPKKRM   RKSNDPGWENL   EKLLVFTAAG
VKPQGGKVA GF   DLDGTLITTR   SGKVFPTGPS   DWRI LYPEIP
RKLRELEAEG   YKLVIFTNQM   SIGRGKLP AE   EFKAKVEAVV
EKLGVPPFQVL   VATHAGLYRK   PVTGMWDHLQ   EQANDGTPIS
IGDSIFVGD A   AGRPANWAPG   RKKKDFSCAD   RLFALNLGLP
FATPEEFFLK   WPAAGFELPA   FDPRTVSRSG   PLCLPESRAL
LSASPEVVVA   VGFPGAGKST   FLKKHLVSAG   YVHVNRDTLG
SWQRCVTTCE   TALKQGKRVA   IDNTNPDAAS   RARYVQCARA
AGVPCRCFLF   TATLEQARHN   NRFREMTDSS   HIPVSDMVMY
GYRKQFEAPT   LAEGFSAILE   IPFRLWVEPR   LGRLYCQFSE
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**Biological Activity** The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.

**Appearance** Lyophilized powder

**Formulation** Lyophilized after extensive dialysis against solution in 10 mM Tris-HCl, 1 mM EDTA, 6% Trehalose, pH 8.0.

**Endotoxin Level** <1 EU/μg, determined by LAL method.

**Reconstitution** It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH<sub>2</sub>O.

**Storage & Stability** Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

**Shipping** Room temperature in continental US; may vary elsewhere.

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## DESCRIPTION

### Background

PNKP Protein assumes a crucial role in the repair of DNA damage, actively participating in both the non-homologous end-joining (NHEJ) and base excision repair (BER) pathways. Employing its two catalytic activities, PNKP plays a pivotal role in maintaining DNA termini compatibility for subsequent extension and ligation processes. It accomplishes this by either removing 3'-phosphates from the DNA backbone or phosphorylating 5'-hydroxyl groups on the ribose sugar. This dual functionality highlights PNKP's significance in resolving various types of DNA lesions, ensuring the integrity of the genome and contributing to the intricate network of cellular mechanisms dedicated to DNA repair and maintenance.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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