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Rabbit Anti-DEM1/PNK antibody

SL3542R

Product Name:	DEM1/PNK
Chinese Name:	多聚合苷酸激酶3磷酸化酶抗体
Alias:	PNK1; Bifunctional polynucleotide phosphatase/kinase; DEM 1; DEM1; DNA 5' kinase/3' phosphatase; PNK 1; PNK; PNK1; PNKP; Polynucleotide 5' hydroxyl kinase; Polynucleotide kinase 3 prime phosphatase; Polynucleotide kinase 3' phosphatase; Polynucleotide Kinase; PNKP_HUMAN.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Cow,Sheep,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-500（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	57kDa
Cellular localization:	The nucleus
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human PNK1/PNKP:51-160/521
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	Mammalian PNK catalyzes the phosphorylation of DNA at 5'-hydroxyl termini and can dephosphorylate its 3'-phosphate termini. It plays an important function in DNA repair following ionizing radiation or oxidative damage. PNK has been reported to participate in the repair of DNA-double strand breaks via PARP-1-dependent nonhomologous end-

joining.

Function:
Plays a key role in the repair of DNA damage,functioning as part of both the non-homologous end-joining (NHEJ)and base excision repair (BER) pathways. Through its two catalyticactivities, PNK ensures that DNA termini are compatible withextension and ligation by either removing 3'-phosphates from, or byphosphorylating 5'-hydroxyl groups on, the ribose sugar of the DNAbackbone.

Subunit:
Monomer (By similarity).

Subcellular Location:
Nucleus.

Tissue Specificity:
Expressed in many tissues with highestexpression in spleen and testis, and lowest expression in smallintestine (PubMed:10446192). Expressed in higher amount inpancreas, heart and kidney and at lower levels in brain, lung andliver (PubMed:10446193).

Post-translational modifications:
Phosphorylated upon DNA damage, probably by ATM or ATR.

DISEASE:
Defects in PNKP are the cause of epilepticencephalopathy, early infantile, type 10 (EIEE10) [MIM:613402]. Adisease characterized by microcephaly, infantile-onset seizures,severe intellectual disability and delayed motor milestones withabsent speech or only achieving a few words. Most patients alsohave behavioral problems with hyperactivity. Microcephaly isprogressive and without neuronal migration or structuralabnormalities, consistent with primary microcephaly.

Similarity:
In the N-terminal section; belongs to the DNA 3'phosphatase family.
Contains 1 FHA domain.

SWISS:
Q96T60

Gene ID:
11284

Database links:

Entrez Gene: 11284Human

Omim: 605610Human

	SwissProt: Q96T60Human Unigene: 78016Human **Important Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.