

T4 DNA Polymerase Protein, T4 phage (His)

Cat. No.:	HY-P78940
Synonyms:	
Species:	Others
Source:	E. coli
Accession:	P04415
Gene ID:	1258685
Molecular Weight:	Approximately 103.6 kDa

PROPERTIES

AA Sequence

MKEFYISLET	VGNNIVERYI	DEN GKERTRE	VEYLPTMFRH
CKEESKYKDI	YGKNCAPQKF	PSMKDARDWM	KRMEDIGLEA
LGMNDFKLAY	ISDTYGSEIV	YDRKFVRVAN	CDIEVTGDKF
PDPMKAEEYI	DAITHYDSID	DRFYVFDLLN	SMYGSVSKWD
AKLAAKLDCE	GGDEV PQEIL	DRVIYMPFDN	ERDMLMEYIN
LWEQKRPAIF	TGWNIEGFDV	PYIMNRVKMI	LGERSMKRFS
PIGRVKSKLI	QNMYSKEIY	SIDGVSILDY	LDLYKKFAFT
NLPSFSLESV	AQHETKKGKL	PYDGPINKLR	ETNHQRYISY
NIIDVESVQA	IDKIRGFIDL	VLSMSYYAKM	PFSGVMSPIK
TWDAIIFNSL	KGEHKVIPQQ	GSHVKQSFPG	AFVFEKPIA
RRYIMSFDLT	SLYPSIIRQV	NISPETIRGQ	FKVHPIHEYI
AGTAPKPSDE	YSCSPNGWY	DKHQEGIIPK	EIAKVFFQRK
DWKKKMFAEE	MNAEAIKKII	MKGAGSCSTK	PEVERYVKFS
DDFLNELSNY	TESVLNSLIE	ECEKAATLAN	TNQLNRKILI
NSLYGALGNI	HFRYYDLRNA	TAITIFGQVG	IQWIARKINE
YLNKVC GTND	EDFIAAGDTD	SVYVCVDKVI	EKVGLDRFKE
QNDLVEFMNQ	FGKKKMEPMI	DVAYRELCDY	MNNREHLMHM
DREAI SC PPL	GSKGVGGFWK	AKKRYALNVY	DMEDKRFAEP
HLKIMG METQ	QSSTPKAVQE	ALEESIRRI L	QEGEESVQ EY
YKNFEKEYRQ	LDYKVI AEVK	TANDIAKYDD	KGWPGFKC PF
HIRGVLTYRR	AVSGLGVAPI	LDGNKVMVLP	LREGNPF GDK
CIAWPSGTEL	PKEIRSDVLS	WIDHSTLFQK	SFVKPLAGMC
ESAGMDYEEK	ASLDLFLFG		

Biological Activity

The specific activity is ≥ 3000 U/mL. Unit Definition: One unit is defined as the amount of enzyme that catalyzes the incorporation of deoxyribonucleotids (dNTPs) into polynucleotides at 37 °C for 30 minutes. Reaction Buffer: 50 mM NaCl, 10 mM Tris-HCl, 10 mM MgCl, PH 7.9 at 25°C.

Appearance

Solution.

Formulation

Supplied as a 0.2 μ m filtered solution of 100 mM KPO₄, 1 mM DTT, 50 % Glycerol, (pH 6.5 @ 25°C)

Reconstitution	N/A.
Storage & Stability	Stored at -20°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -20°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

T4 DNA Polymerase, a key enzyme in viral DNA replication, exhibits dual enzymatic functions critical for its role in genome synthesis. This polymerase showcases both DNA synthesis, where it acts as a polymerase, and exonucleolytic activity, facilitating the degradation of single-stranded DNA in the 3'- to 5'-direction. The latter function serves a proofreading purpose, ensuring the accuracy and fidelity of the replicated viral genomic DNA.

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

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