



T4 DNA Ligase

BACKGROUND

Bacteriophage T4 derived DNA ligase catalyzes the formation of phosphodiester bonds between 3'-OH termini and 5'-P termini in duplex DNA or RNA (1). This enzyme will join blunt end and cohesive end termini as well as repair single stranded nicks in duplex DNA, RNA or DNA/RNA hybrids.

T4 DNA ligase was expressed in E.coli in large quantities and highly purified. MW is 55.3 kDa.

| | |
|---------------------------------------|---|
| Applications: | 1) Insertion of DNA fragment into a vector 2) Linker (or Adaptor) ligation with DNA fragment |
| Size: | 20,000 U (400U/ul) |
| Concentration: | 400 U/ul, where one unit is the amount of enzyme that ligates more than 90% of 6 ug of λ DNA-HindIII fragments in a 20 μ l mixture in 30 minutes at 16°C. |
| Form: | 10mM Tris-HCl (pH 7.6), 50mM KCl, 0.1mM EDTA, 1mM dithiothreitol, 50% glycerol |
| Quality Assurance: | Greater than 95% protein determined by SDS-PAGE (CBB staining) The absence of endonucleases and exonucleases was confirmed. |
| Reagents Supplied with Enzyme: | 10 x T4 Ligase Reaction Buffer (T4-Lig): 500mM Tris-HCl (pH 7.6), 100mM MgCl ₂ , 10 mM ATP, 100mM dithiothreitol |
| Data Link: | UniProtKB/Swiss-Prot P00970 (DNLI_BPT4) |
| Storage: | Store at -20°C |
| References: | 1) 1. Weiss B <i>et al</i> (1968) "Enzymatic breakage and joining of deoxyribonucleic acid." <i>J. Biol. Chem.</i> 243 : 4543-4555 PMID: 4879167 |

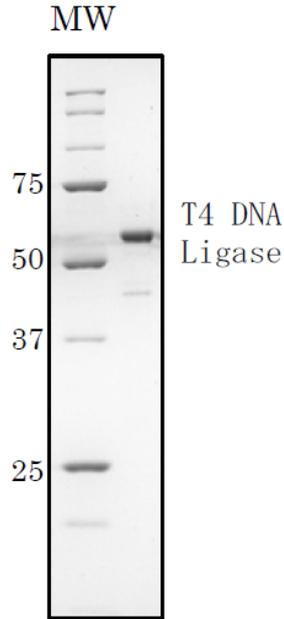


Fig. 1 SDS-PAGE of T4 DNA ligase protein

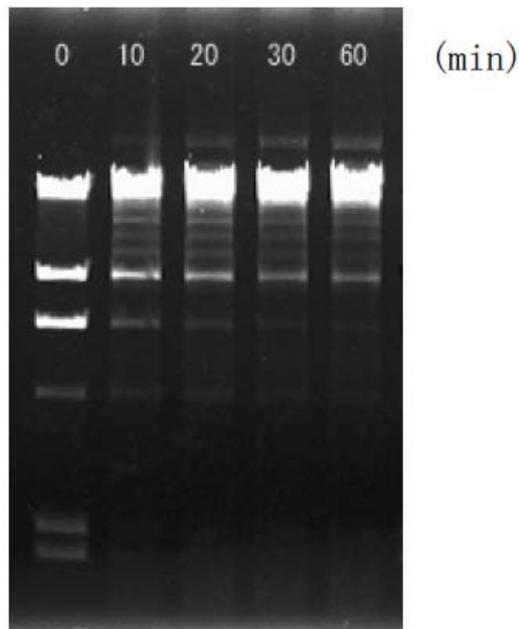


Fig.2 DNA ligation activity
Ligation of Hind III fragments of λ DNA using 1 unit of T4 DNA ligase
Incubation at 16°C for 0, 10, 20, 30, and 60 min.

For research use only. Not for clinical diagnosis.

Manufactured by BioAcademia, Inc.



COSMO BIO Co., LTD.
Inspiration for Life Science

TOYO 2CHOME, KOTO-KU, TOKYO, 135-0016, JAPAN

http://www.cosmobio.co.jp/index_e.asp

E-mail: export@cosmobio.co.jp

Phone : +81-3-5632-9617

FAX : +81-3-5632-9618