T4 DNA Ligase

Description:
T4 DNA Ligase catalyzes the formation of a phosphodiester bond between juxtaposed 5’-phosphate and 3’-hydroxyl termini in duplex RNA or DNA. 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.

Features:
1. Seals single stranded nicks in duplex DNA, RNA or DNA-RNA hybrids.
2. ATP is an essential cofactor for the reaction.

Applications:
1. Catalyzes the linkage of 5’ or 3’ blunt/cohesive ends of double-stranded DNA by formation of phosphodiester bond.
2. Joining of oligonucleotide linkers or adapters to blunt ends.
3. Repair nicks formation in duplex nucleic acids.

Unit Definition:
1U is (Cohesive End Ligation) defined as amount of enzyme that is required to give 50% ligation of Hind III fragments of lambda DNA (5’ DNA termini concentration of 0.12 µM [300µg/ml]) in 20µl of 1X T4 DNA Ligase buffer in 30 minutes at 16°C.

Concentration: 200 units/µl.

Storage conditions: The T4 DNA Ligase enzyme should be stored at -20°C. When stored under the recommended conditions, the product is stable for 18 months.

Thermal inactivation: 65°C for 15 minutes

Supplied with:
10X Buffer Ligase: 50mM Tris-HCl (pH 7.8 at 25°C), 10mM MgCl₂, 10mM DTT, 1mM ATP and 25 µg/ml BSA.

Storage Buffer: (Not Provided)
10mM Tris-HCl (pH 7.5), 50mM NaCl, 0.1mM EDTA, 10mM 2-Mercaptoethanol and 50% Glycerol. Store at -20°C

Please refer disclaimer Overleaf.
Representative Data:

Lane 1: Lambda (λ) DNA- HindIII digest (unligated)
Lane 2: Ligated sample

Quality control:
All preparations are assayed for contaminating endonuclease, exonuclease and non-specific DNase activities.

Technical Assistance
At HiMedia, we pride ourselves on the quality and availability of our technical support. For any kind of technical assistance, mail at mb@himedialabs.com.

Storage temperature

Do not use if package is damaged

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Disclaimer:
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