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Product Information

DNA Ligase
from T4-infected *Escherichia coli*

Catalog Number **D2886**
Storage Temperature –20 °C

EC 6.5.1.1
CAS RN 9015-85-4
Synonyms: T4 DNA Ligase, Polynucleotide Ligase, Polydeoxyribonucleotide Synthase

Product Description
Ligases catalyze the formation of phosphodiester bonds between 3′-hydroxyl ends and 5′-phosphate ends of DNA or RNA forming longer nucleic acid segments. They act on blunt ends and cohesive ends of double-stranded DNA as well as repairing breaks (nicks) in one strand of double-stranded DNA.

T4 DNA Ligase may be used for the following:

- Ligation of blunt ended or cohesive DNA fragments
- Ligation of cloning vector and restriction insert fragments
- Seal nicks in double-stranded DNA and RNA, or DNA/RNA hybrids
- Couple RNA single strands by bridging oligonucleotide adapters

T4 DNA Ligase is inactivated by heating at 65 °C for 10 minutes.

T4 DNA Ligase is supplied in a solution containing 10 mM Tris-HCl, pH 7.5, with 50 mM KCl, 1 mM DTT, and 50% (v/v) glycerol.

Specific activity: 4,000 Weiss units/ml

Unit definition: One Weiss unit is defined as the amount of enzyme required to catalyze the exchange of 1 nmole of ^{32}P from pyrophosphate into ATP as Norit®-absorbable material in 20 minutes at 37 °C.

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability
Store T4 DNA Ligase at –20 °C. Do not store in a frost-free freezer. The frequent freeze-thaw cycles may decrease enzyme activity.

Briefly centrifuge storage container before opening to improve recovery of product.

Reference
1. Weiss, B., et al., Enzymatic breakage and joining of deoxyribonucleic acid. VI. Further purification and properties of polynucleotide ligase from *Escherichia coli* infected with bacteriophage T4. J. Biol. Chem., **243**, 4543-55 (1968).

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