GIBCO BRL

LIFE TECHNOLOGIES™

E. coli DNA Ligase

Cat. No. 18052-019

Lot No. _____ 100 units; 10 U/µl

Exp. Date: ____. Store at -20°C (not frost-free).

Description:

***E. coli* DNA Ligase ligates duplex DNA containing cohesive ends (1). It is commonly used in cDNA cloning procedure to maximize cloning efficiency (2, 3). The enzyme is isolated from *E. coli* 594 which contains λ lysogen λgt4lop-11 *lig*⁺S7 (4).**

Components:

18052-019	*E. coli* DNA Ligase	Lot No.
Y94232	10X *E. coli* Ligase Buffer	Lot No.

Unit Definition:

One unit is defined as the amount of enzyme required to give 50% ligation of *Hin*d III-digested λ DNA in 30 min at 16°C in a final volume of 20 µl and a 5' termini concentration of 0.12 µM (300 µg/ml).

Enzyme Storage Buffer:

10 mM Tris-HCl (pH 7.4)
50 mM KCl
0.1 mM EDTA
1 mM DTT
50% (v/v) Glycerol
0.1% (w/v) Triton® X-100
200 µg/ml BSA

Recommended Reaction Conditions: **See Back Page**

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Recommended Reaction Conditions:

Use GIBCO BRL™ 10X *E. coli* DNA Ligase Reaction Buffer and incubate the reaction mixture at 16°C for 1 h. The final reaction condition is:

18.8 mM Tris-HCl (pH 8.3)
90.6 mM KCl
4.6 mM $MgCl_2$
3.8 mM DTT
0.15 mM NAD
10 mM $(NH_4)_2SO_4$

Store buffer at -20°C.

Quality Control Assays:

This product has passed the following quality control assays: functional absence of endonuclease and exonuclease activities; ligation/recut and ligation efficiency.

The enclosed buffers were assayed with the enzyme and met quality control specifications.

References:

1. Lehman, I. R. (1974) *Science 186*, 790.
2. D'Alessio, J. M. and Gerard, G. F. (1988) *Nucl. Acids Res, 16*, 1999.
3. Okayama, H. and Berg, P. (1982) *Mol. Cell. Biol. 2*, 161.
4. Panasenko, S. M., Cameron, J. R., Davis R. W. and Lehman, I. R. (1974) *Science 196*, 188.