

DATA QUALITY SHEET



T4 DNA Ligase

FOR RESEARCH USE ONLY

Cat. GC-011-0100, GC-011-0250, GC-011-0500, GC-011-1000, GC-011-5000

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| DESCRIPTION | T4 DNA ligase is isolated from a recombinant E. coli strain and is suitable for ligation of sticky- and blunt ended DNA fragments. |
| CONCENTRATION | 10 weiss units/ μ l. |
| UNIT DEFINITION | One unit (Weiss unit) is the amount of enzyme that catalyses the conversion of one nanomol 32 P-ATP in 20 minutes at 37°C. 1 ligation unit = 0,015 Weiss unit. |
| STORAGE BUFFER | 20 mM Tris-HCl buffer pH 7.5; 100 mM NaCl; 0.1 mM EDTA; 2 mM DTT; 0.1 mg/ml BSA; 50% glycerol (v/v) |
| REACTION BUFFER | Reaction buffer (10x): 660 mM Tris-HCl pH 7.5; 50 mM MgCl ₂ ; 10 mM DTE; 10 mM ATP + separate 1 ml PEG Solution (50%) on request PEG greatly increases the rate of ligation of blunt-ended DNA . 5% (w/v) is the suggested concentration of PEG 4000 in the reaction mixture. |
| STORAGE TEMPERATURE | Store T4 DNA ligase below 0°C, preferably at -20°C, in a constant temperature freezer. |
| FUNCTIONAL ANALYSIS | Tested functionally in a unit activity test. |