Tinzyme Co., Limited

Email: sales@tinzyme.com Website: www.tinzyme.com
Tel: +86-755-86134126 WhatsApp/Facebook/Twitter: +86-189-22896756

T4 DNA Ligase for NGS

Product Number: LG0N

Shipping and Storage

Store at -20℃ and transport on dry ice.

Components

Component	LG0N 1500U	LG0N 7500U
T4 DNA Ligase,15 U/μL	100μl	500μl
4×T4 DNA Ligase Buffer	600μl	2×1.5ml

Description

T4 DNA Ligase is isolated and purified from Escherichia coli expressing the T4 DNA Ligase gene after induction and expression. It catalyzes the binding reaction of adjacent DNA strands with 5'phosphate groups and 3'hydroxyl groups via phosphodiester bonds. This enzyme can catalyze the connection of flat or sticky end DNA, repairing single stranded incisions in double stranded DNA, RNA, and DNA/RNA hybridization, but has no activity for single stranded nucleotides.

Application

Mainly used for adapter connection during the construction process of NGS Chinese library.

Unit definition

1U refers to the amount of enzyme required to convert 1nmol [32PPi] into Norit absorbable form within 20 minutes at 37°C in the ATP-PPi exchange reaction, equivalent to approximately 200 viscous terminal junction units.

Protocol

You can choose to use adapters from NEB and Illumina companies. For specific connection methods, please refer to the product manuals of each company. The following are the steps to connect using the adapter we have chosen:

1. Directly add the following reagents to the reaction solution that has completed DNA end repair:

Reagent	Volume
4×T4 DNA ligase Buffer	25μL
T4 DNA ligase,15U/μL	5μL
Adaptor	5μL
ddH_2O	Up to 50μL

At this point, the total volume of solution in the tube is 100μL.

Note: If the initial sample size is less than 100ng, please dilute the adapter 10 times with deionized water to 1.5μM before use.

2. Blow and aspirate the above reagents with a gun, mix well, centrifuge briefly, and collect the solution to the bottom of the tube.
3. Take a warm bath at 23℃ for 20 minutes.

Note:If using a PCR instrument for this operation, please close the heat cap.

4. Continue with subsequent steps, such as selective recovery of DNA fragments or purification of DNA fragments.