T4 DNA ligase

Cat No	Pack size	conc
TL0500	500 U	5U/ul
TL2500	2500 U	5U/ul

Description:

T4 DNA Ligase catalyzes the formation of a phosphodiester bonds between 5'-phosphate and 3'-hydroxyl ends in double strand DNA or RNA with blunt or cohesive-end termini.

Applications

Joining double-stranded DNA with cohesive or blunt termini and 3'T-A overhangs.

Storage: -20℃

Storage Buffer

20mM Tris-HCl (pH 7.5), 1mM DTT, 50mM KCl, 0.1mM EDTA and 50% glycerol

10X Ligation Buffer

Contain with Tris-HCl, MgCl2, DTT, ATP and PEG(pH 7.8 at 25oC)

Inactivation: By heating at 65C for 10min.

Unit definition

0.01 Weiss unit is defined as the amount of enzyme required to catalyze the ligation of greater than 95% of the Hind III fragments of 1mg of Lambda DNA at 16°C in 20 minutes.

Purity: No detectable DNA and nuclease activities.

Additional information

If the reaction is blunt end or T-A ligation must have more units of T4 DNA ligase. T4 DNA ligase is strongly inhibited by NaCl or KCl if the concentration exceeds 200mM.

Protocol

We recommend the molar ratio of vector/insert is 3/1 to 1/3.For example: cohesive end ligation (vector is 3 kb , insert is 600bp)

Ratio of vector/insert	1/1	1/3	3/1
vector DNA	100ng	100ng	100ng
insert DNA	20ng	60ng	~7ng
10Xligation buffer	1ul	1ul	1ul
T4 DNA ligase	1ul	1ul	1ul
add H_2O to final volume	10 ul		
incubate the reaction at RT for5-30 mins			

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