Product Information

Product Name:	**T4 DNA Ligase(with PEG)**
Catalogue Number:	**B1445/B1442**
Size :	200U / 1,000U
Concentration:	5u/ul
Enzyme Description:	T4 DNA Ligase catalyzes the formation of a phosphodiester bond between juxtaposed 5' phosphate and 3' hydroxyl termini in duplex DNA or RNA. This enzyme will join blunt-end and cohesive end termini as well as repair single stranded nicks in duplex DNA, RNA, or DNA/RNA hybrids. Applications: - cloning of restriction fragments; - joining linkers and adapters to blunt-ended DNA
Source :	Isolated from E.coli strain that carries the cloned DNA ligase gene from bacteriophage T4
Storage Buffer :	10 mM Tris-HCl (pH 7.5); 50 mM NaCl; 0.1 mM EDTA; 10 mM 2-mercaptoethanol; 50% glycerol. Store at -20°C
10X Reaction Buffer :	500 mM Tris-HCl (pH 7.8 at 25°C); 100 mM $MgCl_2$; 100 mM DTT; 10 mM ATP; 250 ug/ml BSA
50% PEG 4000 Solution:	Polyethylene glycol 4000 aqueous solution, 50% (w/v)
Unit Definition :	0.01 Weiss unit of T4 DNA Ligase is defined as the amount of enzyme required to catalyze the ligation of greater than 95% of the Hind III fragments of 1µg of Lambda DNA at 16°C in 20 minutes. See the unit concentration on the Product Information Label.
Calculation:	$\text{Units/mg} = \frac{\text{reaction CPM - blank CPM} \times 10}{\text{total CPM} \times \text{reaction volume (ml)}}$ $\text{Units/mg protein} = \frac{\text{units/ml}}{\text{mgP/ml (Lowry)}}$
Quality Control Assay :	Free of contaminating exonuclease and endonuclease.
Optimum temperature:	16^{O}C
Storage :	-20^{O}C

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