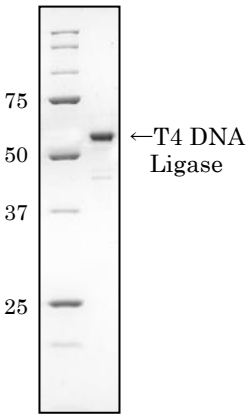



## T4 DNA Ligase

<b>Product code</b>	02-050      02-050-5
<b>Size</b>	20000 U      20000 U x 5
<b>Storage</b>	-20°C
<b>Product Description</b>	<b>T4 DNA ligase</b> was expressed in <i>E.coli</i> in large quantities and highly purified. MW is 55.3 kDa
<b>Concentration</b>	400 U/μl, where one unit is the amount of enzyme that ligates more than 90% of 6 μg of λ DNA-HindIII fragments in a 20 μl mixture in 30 minutes at 16°C.
<b>Purity</b>	Greater than 95% protein determined by SDS-PAGE (CBB staining) The absence of endonucleases and exonucleases was confirmed.
<b>Component</b>	<b>T4 DNA Ligase (400U/μl):</b> 10mM Tris-HCl (pH 7.6), 50mM KCl, 0.1mM EDTA, 1mM dithiothreitol, 50% glycerol (02-T4d, 50μl) <b>10x Reaction Buffer (T4-Lig):</b> 500mM Tris-HCl (pH 7.6), 100mM MgCl <sub>2</sub> , 10 mM ATP, 100mM dithiothreitol (02-T4b, 1.25ml)
<b>Application</b>	1. Insertion of DNA fragment into a vector 2. Linker (or Adaptor) ligation with DNA fragment
<b>Background</b>	<b>Bacteriophage T4 derived DNA ligase</b> catalyzes the formation of phosphodiester bonds between 3'-OH termini and 5'-P termini in duplex DNA or RNA (1). 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.
<b>Data Image</b>	<div style="display: flex; align-items: center;"> <div style="flex: 1;">  <p style="text-align: center;">←T4 DNA Ligase</p> </div> <div style="flex: 1;"> <p style="text-align: center;">0 10 20 30 (min)</p>  </div> <div style="flex: 1; padding-left: 20px;"> <p>Fig.2 DNA ligation activity Ligation of Hind III fragments of λ DNA using 400 unit of T4 DNA ligase Incubation at 16°C for 0, 10, 20, 30, min.</p> </div> </div> <p style="text-align: center;">Fig.1 SDS-PAGE of T4 DNA ligase protein</p>
<b>Data Link</b>	UniProtKB/Swiss-Prot <a href="https://www.uniprot.org/uniprot/P00970">P00970</a>
<b>References</b>	1. Weiss,B. <i>et al.</i> (1968) "Enzymatic breakage and joining of deoxyribonucleic acid." <i>J. Biol. Chem.</i> <b>243</b> : 4543-4555 PMID: <a href="https://pubmed.ncbi.nlm.nih.gov/4879167/">4879167</a>
Please note: All products are FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR MILITARY USE.	