

## IDPOL™ DNA Polymerase

<b>Cat #</b>	IDL007 500U
<b>Concentration</b>	1 µl contains 5 units
<b>Description</b>	<b>IDPOL™</b> is a thermostable DNA Polymerase isolated from a strain of <i>Thermus</i> sp. It is designed for use in primer extension reactions.
<b>Performance &amp; Quality Testing</b>	<b>IDPOL™</b> is highly purified free of contaminating endonucleases, exonucleases and nicking activity. For endonuclease assay, 1 µg of Lambda / Hind III DNA is incubated with 20 units of the enzyme in assay buffer at 75 °C for 16 hrs and no visible contaminating activity is observed. For exonuclease activity, 1 µg of pBR322 plasmid DNA is incubated with 10 units of enzyme for 16 hours at 75 °C in assay buffer and no detectable activity is observed.
<b>Unit Definition</b>	One unit incorporates 10 nmole of dNTP into acid-insoluble material in 30 minutes at 74 °C.
<b>Concentration in Storage Buffer</b>	5 units / µl in 100 mM KCl, 20 mM Tris HCl (pH 8.0, 22 °C) 0.1 mM EDTA, 0.5 mM PMSF, 1 mM DTT, 50% Glycerol.
<b>10 X Reaction Buffer (Mg Free)</b>	100 mM KCl, 100 mM (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> , 200 mM Tris HCl (pH 8.75, 22 °C), 1% Triton X-100 and 1 mg / ml BSA. Buffer is optimized for use with 200 µM dNTPs.
<b>Magnesium Sulphate</b>	20 mM MgSO <sub>4</sub> . The final magnesium sulphate concentration may be variable according to individual requirements. In general, 2 mM MgSO <sub>4</sub> is recommended.
<b>Primer Extension Characteristics</b>	<b>IDPOL™</b> has the template-independent terminal transferase activity which results in the addition of a single nucleotide (adenosine) at 3' end of the extension product. TA cloning vector is recommended if the extension product is needed to be cloned.
<b>References</b>	(1) Kaledin, A.S., et al (1980) <i>Biokhimiya</i> , 45, 494 (2) Kaledin, A.S., et al (1981) <i>Biokhimiya</i> , 46, 1576 (3) Kaledin, A.S., et al (1982) <i>Biokhimiya</i> , 47, 1785 (4) Preiksaitis, H., et al (1998) <i>J. Pharmacology</i> , 285 (2), 853 (5) Paquette, J., et al (1998) <i>J. Biochem.</i> , 273 (23), 14158
<b>Storage</b>	-20° C in a constant temperature freezer. Stable for at least one year. Do not freeze-thaw multiple times.