

DNA Polymerase I Klenow Fragment

Product Information

Cat#	DIA-582
Source	Escherichia coli
Description	<p>The Klenow fragment is a proteolytic product of E. coli DNA polymerase I. It retains 5'→3' DNA polymerase activity and 3'→5' exonuclease (proofreading) activity but lacks 5'→3' exonuclease activity.</p> <p>This enzyme maintains high fidelity while avoiding degradation of DNA 5' ends, making it suitable for fill-in reactions and second-strand synthesis.</p>
Unit Definition	One unit is defined as the amount of enzyme required to incorporate 10 nmol of dNTP into acid-insoluble material within 30 minutes at 37 °C.
Storage	-20 °C
Buffer	25 mM Tris-HCl pH 7.4, 0.1 mM EDTA, 1 mM DTT, 50% glycerol
Applications	Sanger dideoxy DNA sequencing; removal of 3' overhangs or filling-in of 5' overhangs to generate blunt ends; second-strand cDNA synthesis; end repair of inserts during library preparation.
Product Overview	<p>Probe preparation using random primers.</p> <p>Removal of 3' overhangs or filling in of 5' overhangs to generate blunt ends.</p>
Package	<p>5000 U</p> <p>Klenow Fragment (5 U/μL): 1 mL</p> <p>10× Blue Buffer (100 mM Tris-HCl pH 7.9, 500 mM NaCl, 100 mM MgCl₂, 10 mM DTT): 2 mL</p>