

DATA QUALITY SHEET



Klenow Fragment

FOR RESEARCH USE ONLY

Cat. GC-009-0100, GC-009-0250, GC-009-0500, GC-009-1000, GC-009-5000

DESCRIPTION	Klenow Fragment is the Large Fragment of DNA Polymerase I. It is a DNA-dependent polymerase with 3'-5' exonuclease activity. It lacks 5'-3' exonuclease activity of the native enzyme and is suited for random-primed labelling of DNA with random oligonucleotides and for filling-in of 5' protruding ends to blunt-ends. This enzyme can incorporate modified nucleotides (e.g., Cy3-, Cy5-, aminoallyl-, biotin-, digoxigenin- and fluorescently-labeled nucleotides) and is active in restriction enzyme, PCR, RT and T4 DNA Ligase buffers.
CONCENTRATION	5 units/ μ l
APPLICATION	<ul style="list-style-type: none">- DNA blunting by fill-in 5'-overhangs- Random-primed DNA labeling- Labeling by fill-in 5'-overhangs of dsDNA- DNA sequencing by the Sanger method- Site-specific mutagenesis of DNA with synthetic oligonucleotides- Second strand synthesis of cDNA
UNIT DEFINITION	One unit is the amount of enzyme that incorporates 10 nmoles of deoxynucleotides into acid-insoluble form in 30 minutes at 37°C.
STORAGE BUFFER	20 mM Tris-HCl pH 7.5, 100 mM NaCl, 0.1 mM EDTA, 2 mM DTT, 0.1 mg/ml BSA; 50% glycerol (v/v)
REACTION BUFFER	Reaction buffer (10x): 100 mM Tris-HCl pH 7.5, 100 mM MgCl ₂ , 10 mM DTE (= buffer L for restriction endonucleases)
STORAGE TEMPERATURE	Store Klenow Enzyme below 0°C, preferably at -20°C, in a constant temperature freezer.
FUNCTIONAL ANALYSIS	Tested functionally in a unit activity test.