

DESCRIPTION:

M5 DNA polymerase (pfu) is an engineered, high-fidelity DNA polymerase from *Pyrococcus furiosus* recombinantly expressed in *E. coli*. It is used for high fidelity applications due to its 3'→5' exonuclease (proofreading) activity.

BACKGROUND:

Pfu DNA Polymerase is a thermostable enzyme that has optimum activity at 75°C in the presence of magnesium. It has greater than 10x fidelity than Taq DNA polymerase (Lundberg *et al.*, 1991, *Gene*, 108(1):1-6).

FORMULATION:

20 mM Tris pH 7.9, 100 mM KCl, 0.1% Triton X-100, 0.1 mM EDTA, 1 mM DTT, 50% glycerol. 0.2 µm filtered solution.

USAGE:

Conventional Pfu Polymerase PCR ingredients, buffers, conditions and protocols will apply.

STORAGE:

Storage at -80°C. Reconstituted protein solution can be stored at 2-8°C for 7-14 days. Avoid multiple freeze-thaw cycles.

QC:

Purity: ≥85%.