

# Methylamp Hot Taq DNA Polymerase

(Catalog No. R12015)

## Description

Methylamp Hot Taq DNA Polymerase is a chemically modified Methylamp Taq DNA Polymerase. At ambient temperatures it is inactive, having no polymerization activity. Methylamp Hot Taq DNA Polymerase is activated by a 15 min incubation step at 95°C. This prevents extension of non-specifically annealed primers and primer-dimers formed at low temperatures during PCR setup. The enzyme has 5'→3' polymerization dependent exonuclease replacement activity but lacks 3'→5' exonuclease activity.

## Concentration

5 units/μl (One unit is defined as the amount of enzyme required to catalyze the incorporation of 10 nmol of dNTPs into an acid-insoluble form in 30 minutes at 74°C).

## Composition

- Methylamp Hot Taq DNA Polymerase
- 10x Reaction Buffer B1 (Mg<sup>2+</sup>, detergent free): Tris-HCl and (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>
- 10x Reaction Buffer B2 (Mg<sup>2+</sup> free): Tris-HCl, (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> and detergent
- 25 mM MgCl<sub>2</sub>
- 10x Enhancer  
*Additive that facilitates amplification of difficult templates (e.g. GC-rich DNA templates)  
Enhancer should be used at a defined working concentration (1x, 2x or 3x solution).*

Enhancer is NOT a reaction buffer and should be used ONLY IF non-specific amplifications occur.

## Source

Purified from an *E. coli* strain that carries an overproducing plasmid containing a modified gene of *Thermus aquaticus* DNA Polymerase.

## Storage and Dilution Buffer

50% glycerol (v/v), 20 mM Tris-HCl pH 8.7 at 25°C, 100 mM KCl, 0.1 mM EDTA and stabilizers.

## Quality Data

The enzyme is free of nicking and priming activities, exonucleases and non-specific endonucleases. SDS/PAGE - 95 kD band, >98% pure. Activity and stability tested via thermocycling. The error rate per nucleotide per cycle is ~2.5 x 10<sup>-5</sup>; the accuracy is ~4 x 10<sup>4</sup>. Estimated half-life at 95°C is 1.5 hours.

## Applications

- Hot Start PCR
- Primer extension
- TA cloning

## Storage Conditions

Temporary storage for up to 1 month at room temperature has no detrimental effects on the quality of this reagent. However, routine storage at -20°C is strongly recommended.

## Ordering Information

### Products

### Size

### Cat. No.

*This product is for research purposes only. Not intended for use in diagnostic procedures.*

Methylamp Hot Taq DNA Polymerase	500 Units	R12015-1
Methylamp Hot Taq DNA Polymerase	1000 Units	R12015-2
Methylamp Hot Taq DNA Polymerase	2500 Units	R12015-3