

## Methylamp Taq DNA Polymerase

(Catalog No. R12014)

### Description

Methylamp Taq is a highly processive, thermostable DNA polymerase. Due to its genetic modifications Methylamp Taq has an enhanced stability at room temperature with no activity loss for up to 1 month. The enzyme has 5'→3' polymerization-dependent exonuclease replacement activity but lacks 3'→5' exonuclease activity.

### Concentration

5 units/μl (One unit of the enzyme catalyzes the incorporation of 10 nanomoles of deoxyribonucleotides into a polynucleotide fraction in 30 min at 70°C).

### Composition

- Methylamp Taq DNA Polymerase
- 10x Reaction Buffer 1 (Mg<sup>2+</sup> free): 800 mM TrisHCl, 200 mM (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, 0.2% w/v Tween-20
- 25 mM MgCl<sub>2</sub>

### Reagents Provided

- Methylamp Taq DNA Polymerase in Storage Buffer: 20 mM Tris-HCl (pH 8.0), 1mM DTT, 0.1 mM EDTA, 100 mM KCl, 0.5% Nonidet P40, 0.5% Tween 20 and 50% glycerol
- 10x Reaction Buffer: 100 mM Tris-HCl (pH 8.8 at 25°C), 500 mM KCl, 0.8% Nonidet P40
- 10x Reaction Buffer with (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>: 750 mM Tris-HCl (pH 8.8 at 25°C), 200 mM (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, 0.1% Tween 20
- 25 mM MgCl<sub>2</sub> Solution

### Quality Data

Activity and stability tested at 20, 30 and 40 cycles of PCR reactions at 95°C. Tested for the absence of human DNA contamination by PCR with Alu-specific primers.

### Applications

- Suited for a wide range of PCR assays
- Primer extension
- TA cloning

### Recommended PCR Reaction Mix

Component	Quantity
EpiQuik Taq (5 U/μl)	1.25-2.5 U
10x Reaction Buffer (or with (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> )	5 μl (1x)
25 mM MgCl <sub>2</sub>	3-5 μl (1.5-2.5 mM)
10 mM dNTP mix	1 μl (200 μM)
Primer Forward	0.3 -1 μM
Primer Reverse	0.3 -1 μM
DNA template	1-100 ng/μl
H <sub>2</sub> O PCR grade	Up to 50 μl
<b>Total</b>	<b>50 μl</b>

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

### Recommended PCR Cycles

<u>Cycle step</u>	<u>Temp.</u>	<u>Time</u>	<u>Cycles</u>
Initial denaturation	95°C	3-5 min	1
Denaturation	95°C	30-60 s	26-35
Annealing	50-68°C	30-60 s	26-35
Elongation	72°C	1-4 min	26-35
Final elongation	72°C	5-10 min	1

IMPORTANT: Annealing temperature should be 2-6°C lower than the primer melting temperature.

### Safety Warnings and Precautions

This product is designed for research purposes and in vitro use only. According to common laboratory safety practice, it is recommended to wear protective clothing, gloves and safety glasses. Please refer to [www.epigentek.com](http://www.epigentek.com) for Material Safety Data Sheet of the product. Some applications this product is used in may require a license which is not provided by the purchase of this product. Users should obtain the license if required.

### 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

<b>Products</b>	<b>Size</b>	<b>Cat. No.</b>
Methylamp Taq DNA Polymerase	500 Units	R12014-1
Methylamp Taq DNA Polymerase	1000 Units	R12014-2
Methylamp Taq DNA Polymerase	2000 Units	R12014-3