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EpiQuik Hot Taq DNA Polymerase

(Catalog No. R12010)

Description

EpiQuik Hot Taq is chemically modified EpiQuik Taq DNA Polymerase. The enzyme is inactive at ambient temperature, having no polymerase activity. To activate the EpiQuik Hot Taq DNA Polymerase it should be incubated at 95 - 97°C for 15 minutes as a first PCR step. This enzyme allows the PCR setup at ambient temperature without nonspecific annealing and extension. Purified from a recombinant *E. coli* strain with cloned gene encoding *Thermus aquaticus* DNA polymerase. EpiQuik Hot Taq DNA Polymerase has 5'→3' DNA synthesis activity.

Concentration

10 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

- EpiQuik Hot 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 (NH4)2SO4: Tris-HCl (pH 8.8 at 25°C), 200 mM (NH4)2SO4, 0.1% Tween 20
- 25 mM MgCl2 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

- Polymerase chain reaction setup at room temperature.
- Effective incorporation of modified nucleotides.

Recommended PCR Reaction Mix

Component	Quantity
EpiQuik Hot Taq (5 U/µl)	1.25-2.5 U
10x Reaction Buffer (or with (NH4)2SO4)	5 µl (1x)
25 mM MgCl2	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
H2O PCR grade	Up to 50 µl
Total	50 µl

Recommended PCR Cycles

Cycle step	Temp.	Time	Cycles
Initial denaturation	95°C	15 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 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
Store at -20°C. Guaranteed stable for 12 months when properly stored.

Ordering Information

Products	**Size**	**Cat. No.**
EpiQuik Hot Taq DNA Polymerase	500 Units	R12010-1
EpiQuik Hot Taq DNA Polymerase	1000 Units	R12010-2
EpiQuik Hot Taq DNA Polymerase	2500 Units	R12010-3