

EpiQuik Long Taq DNA Polymerase

(Catalog No. R12012)

Description

EpiQuik Long Taq DNA Polymerase is the mixture of two DNA polymerases designed for long PCR. The mixture allows amplifying genomic DNA fragments up to 20 kb and viral DNA fragments up to 40 kb.

Concentration

5 unit/ μ l (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 Long 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: 750 mM Tris-HCl (pH 8.8 at 25°C), 200 mM (NH₄)₂SO₄, 0.1% Tween 20
- 25 mM MgCl₂ Solution

Applications

- Standard and long PCR
- PCR with difficult templates

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.

Recommended PCR Reaction Mix

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

PCR Cycles for <10 kb Fragments

Temperature	Time	Cycles
92-94°C	2-4 min	1
94°C	15 sec - 1 min	25-30
45-65°C	15 sec - 1 min	25-30
72°C	1 min/1-1.5 kb*	25-30

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

72°C	5-10 min	1
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* Extension time for 30s-1min is sufficient for fragments < 1kb

PCR Cycles for >10 kb Fragments

<u>Temperature</u>	<u>Time</u>	<u>Cycles</u>
92-94°C	2-4 min	1
94°C	5 sec - 1 min	10
45-65°C	15 sec - 1 min	10
72°C	1 min/1-1.5 kb	15-20
94°C	5 sec - 1 min	15-20
45-65°C	15 sec - 1 min	15-20
72°C	1 min/1-1.5 kb +20 sec/cycle	15-20
72°C	5-10 min	1

Note: Annealing temperature and time need to be optimized for each primer/template combination.

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 Long Taq DNA Polymerase	500 Units	R12012-1
EpiQuik Long Taq DNA Polymerase	1000 Units	R12012-2
EpiQuik Long Taq DNA Polymerase	2500 Units	R12012-3