**Version No.: FDL1715**

# GenFQ Taq DNA Polymerase

**GenFine Code:** A111-01，A111-02

**Storage condition:** Transportation at ≤0℃, Store at -30 ~ -15℃, Valid period 2 years.

**Description:**

GenFQ Taq DNA Polymerase is a highly thermostable recombination DNA polymerase with a 5'→3' DNA polymerase activity and a 5'→3' exonuclease activity, and lacks a 3'→5' proofreading function. This product can be used in a variety of templates and has good tolerance to fluorescent labeled dUTP and dITP nucleotides. The 3'-end of the PCR products contain A, which can be directly cloned to a T-vector.

**Components:**

| Components | A111-01 (500 U) | A111-02 (1000 U) |
|---|---|---|
| GenFQ Taq DNA Polymerase | 100 μl (5 U/μl) | 200 μl (5 U/μl) |
| 5×Taq Buffer | 1.1 ml | 1.1 ml*2 |

**Applications:**

Widely used for DNA amplification of animals, plants and microorganisms.

**Definition of Activity Unit:**

One unit of the enzyme catalyzes the incorporation of 10 nmol of deoxyribonucleotides into a polynucleotide fraction in 30 min at 74℃.

**Certificate of Analysis:**

1) Endodeoxyribonuclease Assay: No conversion of covalently closed circular DNA to nicked DNA was detected after incubation of 10 U of Taq DNA Polymerase with 1 μg of pUC19 DNA for 4 hours at 37℃.
2) Exodeoxyribonuclease Assay: No degradation of DNA was observed after incubation of 1 μg of lambda DNA/Hind III fragments with 10 U Taq DNA Polymerase for 4 hours at 37℃.
3) Detection of E. coli DNA residue: 20 μl the residual nucleic acid in the product was detected by TaqMan qPCR method, and the residue of E. coli genome was less than 10 copies.

**Protocol:**

**1. Prepare the reaction solution as follows:**

| Components | Volume (50 μl) |
|---|---|
| Template DNA* | X μl |
| GenFQ Taq DNA Polymerase | 1 μl |
| Forward Primer（10 μM） | 1 μl |
| Reverse Primer（10 μM） | 1 μl |
| 5×Taq Buffer | 10 μl |
| dNTPs（10 mM） | 1 μl |
| $ddH_2O$ | Up to 50 μL |

* Plants and animals Genomic DNA 1～500 ng, E.coli Genomic DNA 1～100 ng, λDNA 0.1～10 ng, Plasmid 0.1～10 ng.

**2. Thermal cycling conditions:**

Perform PCR using recommended thermal cycling conditions:

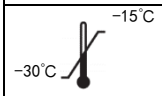
| Step | Temperature | Time | Number of cycles |
|---|---|---|---|
| 1 | 95℃ | 2 min | 1 cycle |
| 2 | 95℃ | 15～30 sec | 25～35 cycles |
| | 55℃* | 15～30 sec | |
| | 72℃ | 1 kb/min | |
| 3 | 72℃ | 5～10 min | 1 cycle |

*The annealing temperature should be 3～5℃ lower than the melting temperature (Tm) of the primers. For complex template, the annealing temperature must also be adjusted.

**Notes:**

Taq DNA Polymerase has a certain reaction activity at room temperature, the PCR reaction system should be prepared on ice, and then placed on the PCR instrument for reaction. This can reduce the non-specific amplification in the reaction preparation stage and help to obtain high specific amplification results.

**[Symbols]**

| Symbols | Meanings |
|---|---|
|  | Manufacturer |
|  | Authorized representative in the European Community |
|  | *In vitro* diagnostic medical device |
|  | This product fulfills the requirements of the European Directive 98/79 EC for in vitro diagnostic medical devices. |
|  | Catalogue number |
|  | Batch code |
|  | Date of manufacture |
|  | Use-by date |
|   | Temperature limit |
|  | Consult instructions for use |
|  | Keep dry |
|  | Keep away from sunlight |
|  | Do not re-use |
|  | Do not use if package is damaged |

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