

KlenTaq DNA polymerase

Cat. No: FPLF005.0250
FPLF005.0500

Store at -20 °C

Contents:

| Component | FPLF005.0250 | FPLF005.0500 |
|-----------------------------------|--------------|--------------|
| KlenTaq DNA poly. 5 U/μl | 250 U | 500 U |
| MgCl ₂ Solution 25 mM | 0.5 ml | 1 ml |
| 10X Buffer MgCl ₂ free | 0.5 ml | 1 ml |

Description:

KlenTaq DNA Polymerase has no the N-terminal portion of the gene, encoding *Thermus aquaticus* (*Taq*) DNA polymerase, leaving a highly active and even more thermal stable DNA polymerase activity. KlenTaq has a wide range of optimal MgCl₂ concentration. The optimal range of Mg₂₊ concentration for KlenTaq is broader than for the majority of thermostable polymerases. The mutation rate during polymerization is two-fold lower for KlenTaq in comparison with full-length Taq DNA polymerase.

This product is suitable for mutation analysis with mutation-specific oligonucleotides. It has a very low background ability to extend a mismatched 3'-oligonucleotide end making it suitable for mutation analysis with mutation-specific oligonucleotides. Amplicons are T/A cloning compatible.

Kit storage:

This kit should be stored at -20 °C. Under this condition reagents are stable for two years from the date of production.

Protocol:

- 1) Thaw 10X reaction buffer, dNTP mixture.
- 2) Mix the master mix thoroughly and dispense appropriate volumes into PCR tubes or plates.
- 3) Add templates DNA to the individual PCR tubes or wells containing the master mix.

| Component | Volume | Final Conc. |
|----------------------------------|-------------|---------------|
| 10X Reaction Buffer | 2 μl | 1X |
| MgCl ₂ Solution 25 mM | 2.4 μl | 3 mM |
| 40 mM dNTPs Mix (10 mM each) | 0.5 μl | 0.25 mM |
| Upstream Primer (10 pmol/ μL) | 1 μl | 0.5 pmoles/μl |
| Downstream Primer (10 pmol/ μL) | 1 μl | 0.5 pmoles/μl |
| Template DNA | Variable | 10 fg~1 μg |
| PCR grade water | Variable | - |
| KlenTaq DNA poly. 5 U/μl | 0.25 μl | - |
| Total Volume | 20μl | |

- 4) Program the PCR machine according to the program outlined.

| Cycle | Time | Temp °C |
|-------|-----------|---------|
| 1 | 4 min | 95 |
| 30-35 | 30 sec | 94 |
| | 30 sec | 57 |
| | 30-60 sec | 72 |
| 1 | 5 min | 72 |

Note:

- * Extension temperature is between 68 and 72°C. We highly recommend 68 °C for more efficiency of Klen Taq DNA polymerase..
- * For PCR products longer than 3~4 Kb, use an extension time of approximately 1 min per Kb DNA.

Disclaimers and Addresses:

This product is for **Research use only** and should only be used by trained professionals.