Taq DNA polymerase Hot-Start (+ dNTPs) with Robust Buffer

02-005 200 Units, 02-005-5 5 x 200 Units

Shipping and Storage: Ship at 4°C or -20°C and store at-20°C. The enzyme solution should not be kept below-20°C to prevent freezing.

Applications: Product is a mixture of Taq DNA polymerase and anti-Taq DNA polymerase antibody (monoclonal) with neutralizing activity of the enzyme. Until the start of the reaction, the antibody binds to Taq DNA polymerases to inhibit the production of nonspecific products. After the reaction starts, when the temperature becomes high, the antibody is deactivated in a short time, and PCR reaction with high specificity is started. Efficient amplification of specific PCR reaction products can be achieved, especially by suppressing non-specific reactions before the cycle or early in the cycle.

*Hot-Start reaction system is suitable for PCR reaction enabling efficient and specific DNA amplification with a variety of primers.

Definition of activity: The activity of incorporating total nucleotides of 10 nmol into an acid-insoluble precipitate per 30 min at 74°C is taken as 1 unit.

Purity: >95% pure by SDS-PAGE.
No contamination of endonucleases and exonucleases detected.

P C R test: Confirmed good amplification in PCR reaction using λ DNA as template.

Composition of PCR-reaction solution (total 50 ul)

Taq DNA polymerase hot-start mix	1 µl
10x Robust Buffer (Taq)	5 µl
2.5mM (each) dNTPs	4 µl
Template	<500 ng
Primer 1	0.2～1.0 mM (final conc.)
Primer 2	0.2～1.0 mM (final conc.)
Sterile distilled water	Up to 50 µl

* Use of excess enzyme may cause inappropriate reaction

Components:

Taq DNA polymerase Hot Start Mixture: Taq DNA polymerase (1 unit/µl), 20 mM Tris-HCl (pH 8. 0), 100 mM KCl, 1 mM DTT, 0. 1 mM EDTA, 50% glycerol, 0. 5% Tween20, 0. 5% Igepal CA-630, anti-Taq antibody (0.8 µg/ml)
(＃02-Hta)

Include: ① 10 x Robust Buffer (Taq) (#02-Trb 1ml)
② 2.5 mM (each) dNTPs (#02-Dnth 800ul)

Figure 1. Amplification example

PCR conditions

98 ° C 10 sec

60 ° C 30 sec 25 cycles

72 ° C 1 min.

PCR was performed using the human genome as a template to target *numb* genetic region. In this case, amplification is overwhelmingly more efficient with hot start (lane 1) than with conventional PCR (lane 2).

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