

Catalog	Unit
TBP0147-1000	1000U
TBP0147-5000	5000U

Description

CSM Taq Polymerases (Cold Sensitive Mutant Taq Polymerases) are a novel class of Hot Start enzymes derived from mutant *E. coli.*, designed for Hot Start PCR. Unlike traditional Hot Start methods that rely on monoclonal antibodies or chemical modifications, CSM Taq polymerases inherently retain Hot Start capability throughout the entire amplification process without requiring pre-incubation steps.

Product Details

Concentration: 5 U/ μ l

Purity: 99% by SDS-PAGE

Storage: -20°C

Applications

- Hot start PCR amplification.
- Specific amplification of complex cDNA and genomic template, for amplification of difficult templates, such as GC-rich fragments and microsatellites.
- Primer extension of SNP markers.
- Amplification of genomic DNA targets up to 10 kb with high fidelity, specificity, and sensitivity.
- Amplification from low copy number DNA template, high through-put Hot Start PCR with high specificity, sensitivity, and yield.
- Routine diagnostic Hot Start PCR requiring high reproducibility.
- Real-Time PCR.
- Multiple PCR.
- Generation of PCR products for TA cloning.

Protocol

1. Reaction Mixture Set Up

Component	Volume	Final Conc.
Template DNA	<1 μ g	as required
Forward Primer (10 μ M)	2 μ l	0.4 μ M
Reverse Primer (10 μ M)	2 μ l	0.4 μ M
10 \times CSMTaq PCRBuffer	5 μ	1 \times
2.5mM each dNTPmix	4 μ l	200 μ M each
CSMTaq DNApolymerase, 5U/ μ l	0.4 μ l	2 unit
ddH ₂ O to final volume	50 μ l	Not applicable

2. Recommended thermal cycling conditions

Temperature	Time	Cycles
94 °C	2 min	
94 °C	40-60sec	30-35cycles
55-68°C	40-60 sec	30-35cycles
70°C	2min/KB	30-35cycles
70°C	5 min	
4°C	hold	

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