Tinzyme Co., Limited

Email: sales@tinzyme.com Website: www.tinzyme.com
Tel: +86-755-86134126 WhatsApp/Facebook/Twitter: +86-189-22896756

CSM Taq DNA Polymerase

Product Number: PC05

Shipping and Storage

Store at -20°C.

Description

CSM Taq polymerases (Cold sensitive mutant Taq polymerases) is a kinds of HotStar Polymerase. Source from the mutant Ecoli. CSM Taq polymeraseunlike the monoclonal antibody based hot start Taq or chemical modified hot start Taq,Cold Taq is the cold sensitive mutant Taq.It retain the hot start ability throughout the whole amplification cycles.

Cold sensitive mutant Taq polymerases are designed for Hot Start PCR, it is none activity at low temperature. It offers excellent specificity and two-fold higher fidelity than wild-type Taq. It is designed for PCR with difficult templates such as GC-rich fragments and microsatellites. Cold sensitive mutant Taq polymerases are particularly well suited to primer extension of Single Nucleotide Polymorphism (SNP) markers.

Cold sensitive mutant Taq polymerases maintain excellent specificity and minimal background even in conditions designed for high yield. In fact, even on genomic templates, the enzyme can be used with $MgCl_2$ concentrations as high as 10 mM.

Cold sensitive mutant Taq polymerases are capable of extending through difficult regions, e.g. regions, which include inverted tandem repeats and those with high amounts of secondary structure.

Cold sensitive mutant Taq polymerases work in a totally unique way, involving improved nucleotide selection at the active site, and a much lower rate of mis-match extension, meaning that only perfectly aligned primers will be extended. As a result, the enzyme can give even higher specificity than hot-start (manual or automatic) techniques without the need for inconvenient pre-incubation steps.

Conc.

5 U/μl

Applications

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

Quality Control

Functional absence of double and single-stranded endonuclease activity; Purity>99% test by SDS gel electrophoresis; Each lot of CSM Taq DNA Polymerase is assayed for amplification from as little as 10 ng of human genomic DNA ; Retain full activity at room temperature for one week; No host DNA residue.

Protocol

1. Reaction Mixture Set Up

Component	Volume	Final Concentration
Template DNA	<1 ug	as required
Forward Primer (10 μM)	2 μl	0.4 μM
Reverse Primer (10 μM)	2 μl	0.4 μM
10×CSM Taq PCR Buffer	5 μl	1×
2.5mM each dNTPmix	4 μl	200μM each
CSM Taq DNA polymerase, 5U/μl	0.4 μl	2 unit
ddH_2O to final volume	50μl	Not applicable

2. Recommended thermal cycling conditions

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