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TAQ MIX . KIT C/DNTPS MG, azul bromofenol, C/200 PBS.

Description

HSTM 2X Mix is a premixed, ready-to-use solution containing HSTM Taq DNA Polymerase, dNTPs, Mg2+ and Reaction Buffer at optimal concentrations for efficient amplification of DNA templates by PCR. To prepare the final PCR, only primers and template DNA are added. HSTMTaq Mix contributes to highly reproducible PCR by reducing the risk of pipetting errors, miscalculation and contamination. It also contributes to higher specificity by optimizing the system, reducing primer-dimer rate. The mix has dramatic increased the sensitivity by adding enhancer.

HSTM Taq DNA Polymerase is a thermostable recombinant DNA polymerase derived from thermophilic bacterium Thermus aquaticus .Its molecular weight is 94 kDa. HSTM Taq DNA Polymerase can amplify DNA target up to 5 kb. The elongation velocity is 0.9~1.2kb/min. It has 5' to 3' polymerase activity but lacks 3' to 5' exonuclease activity, which results in a 3'-dA overhangs PCR product. All components of the HSTM Mix are at optimal concentration for efficient amplification, which contributes to highly specific incorporation of primer and template.

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Features

Convenient: Dongsheng recombinant Taq DNA Polymerase in a ready-to-use mix
Fast: saves time due to reduced number of pipetting steps
Reproducible: lower contamination and pipetting error risk
Compatible with TA cloning: generates PCR products with 3'-dA overhangs

Application

High throughput PCR
Routine PCR with high reproducibility
Generation of PCR products for TA cloning
RT-PCR

Quality Control

The absence of endodeoxyribonucleases, exodeoxyribonucleases and ribonucleases is confirmed by appropriate quality tests. Functionally tested in amplification of a single-copy gene from human genomic DNA.

Unit Definition

One unit is defined as the amount of the enzyme required to catalyze the incorporation of 10 nM of dNTPs into an acid-insoluble form in 30 minutes at 70°C using herring sperm DNA as substrate.

Composition of the HSTM Mix

0.3U/ul HSTM Taq DNA polymerase

2xHSTM PCR Buffer

0.4mM dNTPs, 3.2mM MgSO4

0.02% bromophenol blue.

Store at -20°C
Repeated freeze-thaw cycles do not reduce the activity of the reactions.

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Protocol for PCR

All solutions should be thawed on ice, gently vortexed and briefly centrifuged.

Add in a thin walled PCR tube on ice:

For a total 50μl reaction volume

Component of sample	Volume	Final concentration
HS^{TM} Mix (2X)	25 μl	1X
Forward Primer	variable	0.1-1 μM
Reverse Primer	variable	0.1-1 μM
Template DNA	variable	10 pg-1 μg
Water, nuclease-free	to 50 μl	–

For a total 25μl reaction volume

Component of sample	Volume	Final concentration
HS^{TM} Mix (2X)	12. 5 μl	1X
Forward Primer	variable	0.1-1 μM
Reverse Primer	variable	0.1-1 μM
Template DNA	variable	10 pg-1 μg
Water, nuclease-free	to 25 μl	–

·Gently vortex the sample and briefly centrifuge to collect all drops to the bottom of the tube.

·Overlay the sample with mineral oil or add an appropriate amount of wax. This step may be omitted if the thermal cycler is equipped with a heated lid.

·Place samples in a thermocycler and start the program