HS Prime Taq Premix (2X)

Cat. No.	Size	Remark
G-7100	1 mL	2X concentration

Package Information

G-7100	2X HS Prime Taq Premix (1.0 mL X 1) - with HS Prime Taq DNA Polymerase, reaction buffer, enzyme stabilizer and dNTPs mixture.

Description

HS Prime Taq Premix contains HS Prime Taq DNA Polymease, reaction buffer, dNTPs mixture and enzyme stabilizer, and optimizes the convenience to use by adding sediment for electrophoresis.
HS Prime Taq DNA Polymerase is designed for hot-start PCR, a technique that enhances the specificity, sensitivity and yield of DNA amplification. In addition, the enzyme provides the convenience of reaction set-up at room temperature. The enzyme is inactived at room temperature, avoiding extension of nonspecifically annealed primers or primer dimers and providing higher specificity of DNA amplification. The functional activity of the enzyme is restored during 10 minute incubation at 94℃. The activated enzyme maintains the same functionality as Taq DNA polymerase: it catalyzes 5′→3′ synthesis of DNA, has no detectable 3′→5′ proofreading exonuclease activity.

Composition of 2X Premix

HS Prime Taq DNA Polymerase 1 unit/10㎕, 2X reaction buffer, 4mM $MgCl_2$, enzyme stabilizer, sediment, pH 9.0 and 0.5 mM each of dATP, dCTP, dGTP, dTTP.

Applications

Hot-start PCR, RT-PCR, Amplification of low copy or high range size DNA target, Real-time PCR, Muliplex PCR and T-vector cloning.

Protocol

Optimal reaction conditions, such as reaction time, temperature and amount of template DNA, may vary and must be individually determined.

1. Thaw 2X HS Prime Taq Premix solution.

2. Prepare a master mix.

Components	Volume	Final Conc.
2X HS Prime Taq Premix	10㎕	1x
Upstream Primer	Variable	0.1 ~ 1.0 uM
Downstream Primer	Variable	0.1 ~ 1.0 uM
Template DNA(1)	Variable	10 fg~1 ㎍
Sterilized D.W	add up to 20㎕	
Total Volume	20㎕	

(1) Amount of template:
- Bacteriophage lambda, cosmid, plasmid: 10 fg ~ 300 ng
- Total genomic DNA: 100 ng ~ 1 ug

3. Mix the master mix and dispense appropriate volumes into PCR tubes. Centrifuge the reactions in a micro-centrifuge for 10 seconds.

4. Perform PCR using your standard parameters (3-step cycling).

Step	Temp. & Time		Cycles
	Temp.	Time	
Initial denaturation	**95℃**	**10 min.**	1
Amplification	95℃ 50~60℃ 72℃	30 sec. 30 sec. 30~60 sec.	25 ~ 45
Final extension	72℃	5 min.	1

* For PCR products longer than 3~4kb, use an extension time of approximately 1 min per Kb DNA.

5. Separate the PCR products by agarose gel electrophoresis and visualize with EtBr or any other means.

*** A DNA fragment which is amplified by HS Prime Taq DNA Polymerase has A-overhang, and it enables you to do cloning by using T-vector.**

- Research Use Only
- Store at -20℃
  (Avoid multiple freeze-thaw cycles and exposure to frequent temperature changes.)

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