GLOBAL GENE NETWORK
GeNeT BIO

HS Prime Taq Premix (2X)

Product Name	Cat. No.	Size
HS Prime Taq Premix (2X)	G-7100	1 ml X 1
	G-7101	1 ml X 3
	G-7102	1 ml X 5
	G-7200	96 tube X 1
	G-7201	96 tube X 3
	G-7202	96 tube X 5

Package Information

G-7100	2X HS Prime Taq Premix (1.0 ml X 1) - with HS Prime Taq DNA Polymerase, reaction buffer, enzyme stabilizer, dNTPs mixture and loading dye
G-7200	2X HS Prime Taq Premix 10㎕ in 0.2 ml 8-strip PCR tube (96 tube X 1) - with HS Prime Taq DNA Polymerase, reaction buffer, enzyme stabilizer, dNTPs mixture and loading dye

Description

HS Prime Taq Premix contains HS Prime Taq DNA Polymerase, reaction buffer, dNTPs mixture, enzyme stabilizer, loading dye, 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 non-specifically 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, 4 mM $MgCl_2$, enzyme stabilizer, sediment, loading dye, 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 targets, Multiplex PCR, T-vector cloning.

◈ Research Use Only

◈ Store at -20℃

Protocol

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

The following 20㎕ reaction volume can be used for PCR.
1. Thaw the 2X HS Prime Taq Premix.
2. Prepare a mastermix.
   Note: if you use the Cat. No. G-7200 (10㎕ in 8-strip PCR tube), transfer the mixture (template DNA+primers+D.W.=10㎕) to HS Prime Taq Premix (2X, 10㎕) tube.

Component	Volume	Final conc.
Sterilized D.W.	add up to 20㎕	-
2X HS Prime Taq Premix	10㎕	1X
Upstream Primer (10 pmoles/㎕)	0.2~2.0㎕	0.1~1.0 pmoles
Downstream Primer (10 pmoles/㎕)	0.2~2.0㎕	0.1~1.0 pmoles
Template DNA	Variable	10 fg~1㎍

★**Amount of template DNA**
Bacteriophage λ, cosmid, plasmid DNA: 10 fg~300 ng
Genomic DNA: 100 ng~1㎍

3. Mix the mastermix and dispense appropriate volumes into PCR tubes. Centrifuge the PCR tubes in a microcentrifuge for 10 seconds.
4. Perform PCR using your standard parameters (3-step cycling).

Step	Temp. & Time		Cycles
	Temp.	Time	
Initial denaturation	95℃	3~5 min.	1
Denaturation	95℃	30 sec.	25~35
Annealing	x℃	30 sec.	
Extension	72℃	30~60 sec.	
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 Premix has A-overhang, and it enables you to do cloning by using T-vector.**