HS-Taq DNA Polymerase

User's Instruction

Description

HS-Taq DNA Polymerase contains engineered Taq polymerase and Taq monoclonal antibody, thereby preventing DNA synthesis at room temperature. During the initial DNA denaturation step, the antibody is denatured, releasing the polymerase and allowing DNA synthesis to proceed. HS-Taq DNA Polymerase prevents nonspecific amplification due to mispriming and/or the formation of primer dimers during PCR assembly.

Kit Contents

	500U
1. HS-Taq DNA Polymerase (5 U/μl)	100 μl
2. 5 × HS-Taq Buffer (with $MgCl_2$)	1 ml

Note

- **HS-Taq DNA Polymerase Storage Buffer:** 20mM Tris-HCl (pH8.0), 0.1 mM EDTA, 1mM DTT, 100 mM KCl, Stabilizers, 50% glycerol.
- **5 × HS-Taq Buffer (with $MgCl_2$):** 200 mM Tris-HCl (pH 8.4), 200 mM KCl, 100 mM $(NH_4)_2SO_4$, 15 mM $MgCl_2$, etc.

Protocol

1. Set up PCR amplification reaction as the following table (take 50 μl per well as an example):

Component	Volume
HS-Taq DNA Polymerase (5 U/μl)	0.5-1 μl
5 × HS-Taq Buffer (with $MgCl_2$)	10 μl
dNTP Mixture (2.5 mM each)	4 μl

Template	<0.5 μg
Forward Primer (10 μM)	1 μl
Reverse Primer (10 μM)	1 μl
ddH_2O	Up to 50 μl

2. Thermocycling Conditions

	Temperature	Time
Initial Denaturation	94°C	2-5 min
30 Cycles	94°C	30 sec
	50-60°C	30 sec
	65°C	1-2kb/min
Final Extension	65°C	5-10 min

Storage

Store at -20°C for 1 year. Avoid multiple freeze-thaw cycles.