Certificate of Analysis

PRODUCT: Taq DNA Polymerase 5U/μl, 500U
Cat. No.: BR400-500U
COMPONENTS: Size : 500 units
Concentration : 5 units/μl
Volume : 100 μl

DESCRIPTION:

- Unit Definition :

One unit is the amount of enzyme that will convert 10 nmoles of dNTPs into acid-insoluble form in 30 minutes at 70°C under that stated assay.

- Assay Conditions :

10 mM Tris-HCl (pH 9.0)(25°C), 50 mM KCl, 1.5 mM MgCl2, 0.1% (w/v) gelatin, 1% Triton X-100 incubate at 72°C

- Storage Buffer :

50 mM Tris-HCl (pH 8.0), 1 mM EDTA, 1 mM DTT, 50% (v/v) glycerol.

- Reaction Buffer :

10X Buffer contains : 100 mM Tris-HCl (pH 9.0), 500 mM KCl, 0.1% (w/v) gelatin, 15 mM MgCl2, 1% Triton X-100

- Endonuclease Assay :

Incubation of 10 units of the enzyme in assay buffer with 0.5 μg of pBR322 DNA for one hour at 70°C give < 5% conversion of RFI to RF II DNA.

- Exonuclease Assay :

Incubation of 20 units of the enzyme with 1μg lambda DNA for 16 hours at 65°C in the Tth I restriction enzyme buffer does not produce any detectable degradation of the DNA.

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Recommended PCR cycles:

Cycle	Temp.	Time	cycles
Initial denaturation	95°C	2-5min	1
Denaturation	95°C	30-60s	25-35
Annealing	50-68°C	60-60s	
Elongation	72°C	1-3min	
Final elongation	72°C	5-10min	1
Stored	4°C	60min	1

Recommended PCR reaction mix:

Components	Quantity
Pro Taq Plus DNA Polymerase (5 U/μl)	0.2 μl
10x Reaction Buffer	5 μl (1x)
25 mM $MgCl_2$	0 – 5 μl (0 - 2.5 mM)
10 mM dNTP mix	1μl (200 μM)
Primer-Forward	0.3 – 1μM
Primer-Reverse	0.3 – 1μM
DNA template	1 – 100 ng
Sterile water	Up to 50 μl
Total	**50 μl**

STORAGE: Store frozen.

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