Taq Platinum DNA Polymerase

Cat. no. ET 104

Storage: -20℃

Concentration: 2.5U/μl

Product size:

Product components	ET104-01	ET104-02
***Taq* Platinum DNA Polymerase**	250U	500U
10 × *Taq* Platinum Buffer Ⅰ	1.8 ml	1.8 ml
10 × *Taq* Platinum Buffer Ⅱ	1.8ml	1.8ml

GENTAUR

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Introduction

Taq Platinum DNA Polymerase is a chemically modified hot-start polymerase with 3'-5' and 5'-3' exonuclease activity. It is inactive at ambient temperatures and must be activated by heat treatment (5-10min at 94℃). This prevents the extension of non-specifically annealed primers or primer–dimers at low temperatures during PCR setup, and therefor highly increases the sensitivity and specificity of PCR amplification. *Taq* Platinum DNA Polymerase has unique high fidelity and it possesses higher extension rate and amplification efficiency than *Pfu* DNA Polymerase.

Taq Platinum DNA Polymerase generates PCR products with 3'-dA overhangs that can be directly used in TA-cloning. To obtain higher cloning efficiency, however, PCR products should be purified and added 3-d'A overhangs before TA cloning procedures.

Unit Definition

One unit of *Taq* DNA Polymerase is defined as the amount that incorporates 10 nmol of dNTPs into acid-insoluble material within 30 min at 74°C with activated salmon sperm DNA as the template-primer.

Storage Buffer

20mM Tris-HCl (pH 8.0), 0.1mM EDTA, 1mM DTT, 100mM KCl, Stabilizers, 50% glycerol

10×*Taq* Platinum Buffer

Buffer Ⅰ: 200mM Tris-HCl (pH 8.4), 200mM KCl, 100mM $(NH4)_2SO_4$, 15mM $MgCl_2$, other components

Buffer Ⅱ: 200mM Tris-HCl (pH 8.8), 100mM KCl, 100mM $(NH4)_2SO_4$, 20mM $MgSO_4$, other components

- Please use Buffer Ⅰ at first. When DNA amplification can not be confirmed, the result may be improved by using Buffer Ⅱ.

Applications

Amplify DNA fragments from complex templates (e.g. Genome) with high fidelity, for applications such as gene cloning, Site-directed mutagenesis, SNP etc.

Example

Note: the following example only for reference, user must set up optimal reaction system according to different reaction conditions such as different templates or primers *etc*.

1. To 50 μl PCR reaction system: 1 kb fragment of human genomic DNA was amplified (If use different reaction system, please proportionally increase or decrease the amount of reaction components referring to this system).

Template	< 1 μg
Primer 1(10 μM)	1 μl
Primer 2(10 μM)	1 μl
10×*Taq* Platinum Buffer	5 μl
dNTP Mixture(2.5mM)	4 μl
Taq Platinum (2.5 U/μl)	0.5-1 μl
ddH_2O	up to 50 μl

2. PCR cycle set-up:

94℃ 5 min		
94℃ 30 sec	⎫	
55℃ 30 sec	⎬	30 cycles
72℃ 2 min	⎭	
72℃ 5 min		

3. Result detection: direct load 5 μl PCR products to agrose gel for PCR detecting after the PCR reaction.

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