Taq DNA Polymerase, concentrated

DATASHEET
Version: 201807

Cat. No. E00012
Size: 2500 U

Description:

Taq DNA Polymerase is a thermostable DNA polymerase isolated from an *E. coli* strain that carries the *Taq* DNA polymerase gene. *Taq* DNA Polymerase is the most common polymerase used in PCR*. In some cases, such as RAPD PCR, adding large volume of general *Taq* DNA polymerase (5 U/μl), which has a high concentration of glycerol in its storage buffer, will increase the glycerol concentration in the reaction mix, interfering with PCR performance. The use of concentrated *Taq* DNA Polymerase (25 U/μL), with a far slimmer dose of glycerol, can prevent poor PCR efficiency.

Note: Concentrated *Taq* DNA Polymerase (GenScript, E00012) is supplied with 10X reaction buffer containing 15 mM magnesium chloride. The dNTP (10 mM) mixture may be ordered separately (See related products).

Key Feature:

Terminal Transferase Activity: A single nucleotide (adenosine) is added to the 3' end of the extension product.

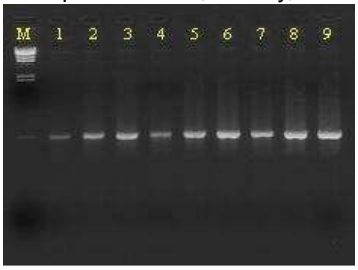
High-Purity: No contamination activity has been detected in standard test reactions.

Concentration:

Supplied in 25 units/μL in 20 mM Tris HCl (pH 8.0), 0.1 mM EDTA, 1 mM DTT, 0.1% Triton X-100 and 50% glycerol.

QC Tests

PCR performance, activity, nuclease.



Lane	Taq	United Used
1	Leading Brand A	0.1
2		0.25
3		0.5
4	Leading Brand B	0.1
5		0.25
6		0.5
7	Genscript	0.1
8		0.25
9		0.5

Unit Definition:

One unit is defined as the amount of enzyme that can incorporate 10 nmol of dNTP into acid-insoluble material in 30 minutes at 74°C.

10 X reaction Buffer (with Mg^{2+})

500 mM KCl, 100 mM Tris HCl (pH 9.0 at 25℃), 15 mM $MgCl_2$, 1% Triton X-100 Buffer. This buffer is optimized for use with 200 μM dNTPs.

Important:

If another reaction buffers are used with *Taq* DNA Polymerase, Triton X-100 must be added to a final concentration of 0.1% to ensure high enzyme activity with *Taq* DNA Polymerase.

Storage: Store the product at -20°C.

Formulation:

Genscript *Taq* DNA Polymerase has been formulated using GenScript's proprietary technology. The enzyme can be shipped at room temperature or stored at 37°C for seven days without any significant loss of activity.

Applications:

The applications of *Taq* DNA Polymerase are as follows:

- PCR*
- 3' A-tailing of blunt ends (T/A-cloning)
- Primer extension
- DNA labeling reactions

The PCR process is covered by US. Patents Nos. 4683195 and 4683202, issued to Cetus and owned by Hoffman-La Roche Inc. GenScript does not encourage or support the unauthorized use of the PCR process. Use of this product is recommended for persons who either have a license to perform PCR or are not required to obtain a license. Sale of this product is restricted to regions or countries where native *Taq* DNA polymerase patents have been invalidated.

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