

Data sheet

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Dia^{HY}TAQ DNA POLYMERASE**RESEARCH USE ONLY****Recombinant Dia^{HY}Taq DNA Polymerase**

(Deoxynucleosidetriphosphate: DNA Deoxynucleosidyltransferase E.C. 2.7.7.7.)

SOURCE:**Thermus Auqaticus YT1** strain

Cat.No.	Pack	Conc.
DTH-250	250 Units	5 U/μl
DTH-1000	1000 Units	5 U/μl

Stability:

Shelf life 24 months if store at -20°C

UNIT DEFINITION

One unit is defined as the amount of enzyme that incorporates 10 nmoles of dNTP's into acid-insoluble form in 30 minutes at 74°C under assay conditions.

STORAGE AND DILUTION BUFFER:

20mM Tris-HCL (pH 8.0);100mM KCL;0.1mM EDTA; 1mM DTT; 50 glycerol; 0.5% Nonidet P-40;0.5% Tween-20

AMPLIFICATION BUFFERS:

10X NH4-buffer: 166mM (NH₄)₂SO₄; 670mM Tris-HCL (pH 8.8 at 25°C); 0.1% Tween-20.

5X "Ready-to-load" NH4-buffer: 166mM (NH₄)₂SO₄; 670mM Tris-HCL (pH 8.8 at 25°C);0.1% Tween-2; two inherent dyes; stabilizers

DESCRIPTION

Dia^{HY}TAQ DNA Polymerase is a thermostable 94 kDa DNA Polymerase purified from E.coli PVG-AI recombinant strain expressing *Thermus aquaticus* polymerase gene and **modified by addition of the special components.**

Dia^{HY}Taq DNA Polymerase allows amplifying complex, low-copy DNA templates, degraded DNA samples, improving yield of target DNA.

As the base component of **Dia^{HY}Taq** DNA Polymerase is **Dia^{HY}Taq** Polymerase, it catalyzes polymerization of nucleotides into duplex DNA in the 5'-3' direction in presence of Mg²⁺ ions. The enzyme possesses also a 5'-3' exonuclease activity. Amplification of target DNA fragments from 100 b.p. to 5000 b.p. can be achieved with this enzyme.

ASSOCIATED ACTIVITIES:

Endonuclease and exonuclease activities were not detectible after 2 and 1 hours incubation, respectively, of 1 μg lambda DNA and 0.22 μg of EcoR I digested lambda DNA, respectively, at 72°C in the presence of 15-20 units of **Dia^{HY}Taq** DNA polymerase

APPLICATIONS:

- Real-Time PCR
- Low-copy number PCR
- Complex DNA template PCR
- Routine PCR
- Primer extension

STORAGE CONDITIONS :

Store **Dia^{HY}Taq** DNA Polymerase at -20°C for long term storage

SHIPPING CONDITIONS:

Should be shipped at ambient temperature

For long distance shipments preferably in **Blue Ice**