

Data sheet

This data sheet provided for information only

DiaTaq^{RED} DNA POLYMERASE**RESEARCH USE ONLY****Recombinant DiaTaq^{RED} DNA Polymerase**

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

SOURCE:**Thermus Auqaticus YT1** strain

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

DESCRIPTION

DiaTaq^{Red} DNA Polymerase is a thermostable 94 kDa DNA Polymerase purified from E.coli PVG-AI recombinant strain expressing **Thermus aquaticus** polymerase gene.

The enzyme catalyzes polymerization of nucleotides into duplex DNA in the 5'-3' direction in presence of Mg²⁺ ions. The enzyme is stained in **red**. **The stain facilitates the visual control of mixing the enzyme with other components in reaction.** The stain doesn't influence on enzymatic activity of polymerase and other general characteristics

Stability:

Shelf life 24 months if store at -20°C

UNIT DEFINITION

One unit 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

ASSOCIATED ACTIVITIES:

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

AMPLIFICATION BUFFERS:

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

APPLICATIONS:

- Routine PCR
- Primer extension
- RT-PCR

5X "Enhanced" NH4-buffer: 166mM (NH₄)₂SO₄; 670mM Tris-HCL (pH 8.8 at 25°C); 0.1% Tween-20; stabilizers/enhancer

STORAGE CONDITIONS :

Store **DiaTaq^{Red}** 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**