DIALAT Ltd.

Data sheet
This data sheet provided for information only

Dia^{HY}TAQ^{RED} DNA POLYMERASE

RESEARCH USE ONLY

Recombinant Dia^{HY}Taq^{RED} DNA Polymerase

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

Cat.No.	Pack	Conc.
Dia-1110	**500 Units**	**5 U/μl**
Dia-1111	**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 moles 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 $(NH_4)_2SO_4$; 670mM Tris-HCL (pH 8.8 at 25°C);0.1% Tween-20.

5X "Enhanced" NH4-buffer: 166mM $(NH_4)_2SO_4$; 670mM Tris-HCL (pH 8.8 at 25°C);0.1% Tween-20; stabilizers/enhancer

SOURCE:
Thermus Auqaticus YT1 strain

DESCRIPTION
Dia^{HY}TAQ^{RED} DNA Polymerase is a thermostable 94 kDa DNA Polymerase purified from E.coli PVG-AI recombinant strain expressing ***Thermus aquatiqus*** polymerase gene and **modified by addition of the special components.**
Dia^{HY}TAQ^{RED} DNA Polymerase allows amplifying complex, low-copy DNA templates, degradated DNA samples, improving yield of target DNA.
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
As the base component of ***Dia^{HY}TAQ^{RED}*** DNA Polymerase is ***DiaTAQ*** Polymerase it catalyzes polymerization of nucleotides into duplex DNA in the 5'-3' direction in presence of Mg^{2+} ions. The enzyme possesses also a 5'-3' exonuclease activity. Amplification of target DNA fragments from 100 b.p. to 5 000 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^{RED}*** DNA polymerase

APPLICATIONS:
- High sensitivity applications
- Routine PCR
- Low-copy number PCR
- Complex DNA template PCR
- Primer extension

STORAGE CONDITIONS :
Store ***Dia^{HY}Taq^{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**

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