

Data sheet

This data sheet provided for information only

Smar^{RED}TAQ DNA POLYMERASE**RESEARCH USE ONLY****Recombinant Smar^{RED}TAQ DNA polymerase**

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

SOURCE:

Thermus Auqaticus YT1 strain, **Mouse monoclonal antibodies**

Cat.No.	Pack	Conc.
DSTR-500	500 Units	5 U/μl
DSTR-1000	1000 Units	5 U/μl

DESCRIPTION:

Smar^{RED}Taq DNA Polymerase is complex mixture of a thermostable 94 kDa **DiaTaq** DNA Polymerase purified from E.coli PVG-AI recombinant strain expressing **Thermus aquaticus** polymerase gene and **specific monoclonal antibodies**, contains inherent dye (preparation colored **RED**) to control addition of polymerase during PCR set up.

Smar^{RED}Taq is inactive under conditions of amplification reaction preparation. It provides improved specificity when compared to standard DNA polymerases. **Smar^{RED}Taq** can eliminate amplification artifacts such as primer-dimer formation and mispriming.

An active complex of **Smar^{RED}Taq** dissociates automatically over **+70°C**, allowing activation of DNA polymerase.

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

ASSOCIATED ACTIVITIES:

Endonuclease and exonuclease activities were not detectable 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 **Smar^{RED}Taq** DNA polymerase

APPLICATIONS:

- Multiplex amplification - **Highly recommended**
- High sensitivity applications
- Low-copy number PCR
- Complex template PCR

STORAGE CONDITIONS :

Store **Smar^{RED}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**