Atlas HotTaq DNA Polymerase - *Data Sheet*

Cat. No.	Pack Size	Conc.
BAS0002	50 U SAMPLE	10 U/µl
BA00203	500 U	10 U/µl
BA00204	1000 U	10 U/µl
BA00205	2500 U	10 U/µl

Lot no:
Exp. Date:

Storage: -20 ºC

Reagents Provided:

- **Atlas HotTaq DNA Polymerase** in Storage Buffer: 20 mM Tris-HCl (pH 8.0), 1mM DTT, 0.1 mM EDTA, 100 mM KCl, 0.5% Nonidet P40, 0.5% Tween 20 and 50% glycerol.
- **10x Reaction Buffer:** 100 mM Tris-HCl (pH 8.8 at 25°C), 500 mM KCl, 0.8% Nonidet P40.
- **10x Reaction Buffer with $(NH_4)_2SO_4$:** Tris-HCl (pH 8.8 at 25°C), 200 mM $(NH_4)_2SO_4$, 0.1% Tween 20.
- **25 mM $MgCl_2$ Solution**

Description:

Atlas HotTaq is chemically modified Atlas Taq DNA Polymerase. The enzyme is inactive at ambient temperature, having no polymerase activity. To activate the Atlas HotTaq DNA Polymerase it should be incubated at 95 - 97°C for 15 minutes as a first PCR step.

This enzyme allows the PCR setup at ambient temperature without nonspecific annealing and extension.

Purified from a recombinant *E. coli* strain with cloned gene encoding *Thermus aquaticus* DNA polymerase.

Atlas HotTaq DNA Polymerase has 5'→3' DNA synthesis activity.

Quality data:

Activity and stability tested at 20, 30 and 40 cycles of PCR reactions at 95°C. Tested for the absence of human DNA contamination by PCR with Alu-specific primers.

Unit definition:

One unit of the enzyme catalyzes the incorporation of 10 nanomoles of deoxy-ribonucleotides into a polynucleotide fraction in 30 min at 70°C.

Recommended PCR reaction mix:

Component	Quantity
Atlas HotTaq (10 U/µl)	1.25-2.5 U
10x Reaction Buffer (**or** with $(NH_4)_2SO_4$)	5 µl (1x)
25 mM $MgCl_2$	3-5 µl (1.5-2.5 mM)
10 mM dNTP mix	1 µl (200 µM)
Primer Forward	0.3 -1 µM
Primer Reverse	0.3 -1 µM
DNA template	1-100 ng/µl
H_2O PCR grade	Up to 50 µl
Total	**50 µl**

Recommended PCR cycles:

Cycle step	Temp.	Time	Cycles
Initial denaturation	95ºC	15 min	1
Denaturation	95ºC	30-60 s	26-35
Annealing	50-68ºC	30-60 s	
Elongation	72ºC	1-4 min	
Final elongation	72ºC	5-10 min	1

IMPORTANT: Annealing temperature should be 2-6ºC lower than the primer melting temperature.

Safety warnings and precautions:

This product is designed for research purposes and *in vitro* use only.

Some applications this product is used in may require a license which is not provided by the purchase of this product. Users should obtain the license if required.

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