iTaq™ DNA Polymerase

250 U (50 µl)	170-8870
5,000 U (1 ml)	170-8875

For research purposes only
Store at -20°C

Storage and Stability

Store the iTaq DNA Polymerase at -20°C in a constant temperature freezer. When stored under these conditions the polymerase is stable for one year after ship date.

Kit Contents

iTaq DNA Polymerase is suitable for many PCR applications. the antibody-mediated hot-start employed by iTaq Polymerase sequesters Taq activity prior to the initial PCR denaturation step. Upon heat activation for three minutes at 95°C, the antibodies denature irreversibly, releasing fully active Taq DNA polymerase. This enables specific and efficient primer extension with the convenience of room temperature reaction assembly.

Reagent	Kit Size	Volume	Description
iTaq DNA polymerase (Clear Cap)	250 U	50 µl	iTaq DNA polymerase, 5 U/µl
10X iTaq Buffer (Blue Cap)		1.25 ml	10X PCR buffer, 200 mM Tris-HCl, pH 8.4, 500 mM KCl
$MgCl_2$ (Green Cap)		1.25 ml	50 mM $MgCl_2$
iTaq DNA polymerase (Clear Cap)	5,000 U	1 ml	iTaq DNA polymerase, 5 U/µl
10X iTaq Buffer (Bottle)		25 ml	10X PCR buffer, 200 mM Tris-HCl, pH 8.4, 500 mM KCl
$MgCl_2$ (Bottle)		25 ml	50 mM $MgCl_2$

Reaction Set Up

Component	Volume per reaction	Final concentration
10X iTaq buffer	5.0 µl	1X
50 mM $MgCl_2$	1.5 µl	1.5 mM
10 mM dNTP mix	1.0 µl	200 µM each
iTaq DNA Polymerase	0.25 µl	1.25 U
Primer 1	x µl	100 nM–500 nM
Primer 2	x µl	100 nM–500 nM
Sterile water	x µl	
DNA template	x µl	
Total Volume	50 µl	

Typical Thermal Cycling Protocol

Cycle 1 Polymerase activation	3 min, 95ºC
Cycle 2: 25–40 repeats	30 sec, 95ºC 30 sec, 55ºC 30 sec – X min, 72ºC (depending on length of PCR product)
Cycle 3	Hold at 4ºC

Reagents and Materials Not Supplied

10 mM dNTP mix (Catalog # 170-8874)
Microcentrifuge tubes, screw capped
Pipette tips, preferably aerosol barrier tips
Vortexer
Microcentrifuge
Tubes for thermal cycler
Sterile water
Primers
iCycler® thermal cycler

Recommendations for Best Results

Due to the sensitivity of PCR, precautions should always be taken to minimize contamination. Steps at all stages of setting up reactions should be designed to prevent reagent contamination with samples, primers, and previous reaction products. This should involve the use of separate areas for reaction set up, template preparation, and reaction product analysis. Also the use of barrier pipet tips and non-flip cap tubes for templates, dilutions, and primers are recommended for reducing contamination.

To learn more about Bio-Rad's complete solution for amplification, visit our website:
www.bio-rad.com/amplification

Bio-Rad Laboratories, Inc.
2000 Alfred Nobel Drive, Hercules, CA 94547
510-741-1000