

EconoTaq[®] DNA Polymerase (Including 10X Reaction Buffer without Mg⁺⁺)



Technical Specifications

5,000 Units/mL
 Catalog No.: 30032-1 (1,000 U/ 200 µL)
 30032-2 (5 X 1,000 U)
 30032-3 (10 X 1,000U)

Includes: 10X Reaction Buffer without MgCl₂ (3 x 1.5 mL); and a separate tube of 25 mM MgCl₂ (1.5 mL) for each 1,000U.

Store at -20°C.

For *In Vitro* Research Use Only.
 Not for Drug or Diagnostic use. Not for use in humans or animals.

Product Description	EconoTaq DNA Polymerase: 1,000 U (200 µL; (Pt. # 93366-1);
Storage Buffer	50% glycerol, 10 mM Tris-HCl (pH 7.5), 100 mM KCl, 0.1mM EDTA, 1 mM DTT, 0.1% Triton X-100.
Stability	EconoTaq DNA Polymerase is stable for one year from the date received if stored at -20°C.
Recommended Reaction Conditions	1 – 2.5 U EconoTaq DNA Polymerase; 1X Reaction Buffer ^{**} ; 1-4 mM MgCl ₂ ; 100-200 µM each dNTP; 1 µM each primer
Activity Determination	One unit catalyzes the incorporation of 10nmol of dNTP into acid-insoluble material in 30 minutes at 70°C in 50 mM Tris-HCl (pH 9.0), 50 mM NaCl, 5 mM MgCl ₂ , 200 µM dGTP, dATP, dTTP, dCTP (a mix of unlabeled and [³³ P]dCTP), 10 µg Activated Calf Thymus DNA, and 0.1 mg/mL BSA.
Absence of Endonuclease or Nicking Activity	Incubation of 10 U of EconoTaq DNA Polymerase with 1 µg of supercoiled pBR322 DNA for 16 hours at 70°C resulted in no detectable conversion to relaxed or linear forms by agarose gel electrophoresis.
Absence of Exonuclease Activity	Incubation of 10 U of EconoTaq DNA Polymerase with 1 µg of HindIII-cut lambda DNA for 16 hours at 70°C resulted in no smearing of bands on agarose gels.
Quality Control	The enzyme is tested in DNA amplification using a variety of templates and primers.
Purity	>99% pure by SDS PAGE. No detectable DNA contamination.

Additional Reagents: Supplied with 10X Reaction Buffer without Mg⁺⁺ (Pt. #98375) containing 100 mM Tris-HCl (pH 9.0), 500 mM KCl, and 1% Triton X-100; and a separate tube of 25 mM MgCl₂ (Pt. #95374).

^{**} The buffer that accompanies EconoTaq (Catalog No. 30032-1) **does not contain MgCl₂**. Add the appropriate amount of the provided 25 mM MgCl₂ to achieve the final desired concentration. Lucigen also provides EconoTaq with 10X Buffer that contains MgCl₂ (Catalog No. 30031-1).

Lucigen Corporation 2905 Parmenter St, Middleton, WI 53562 USA
 Toll Free: (888) 575-9695 | (608) 831-9011 | FAX: (608) 831-9012
lucigen@lucigen.com www.lucigen.com

Recommended PCR conditions:	
Template DNA*	1.0 µL
10 X EconoTaq® Reaction Buffer (-Mg)	5.0 µL
MgCl ₂ (25 mM)	3.0 µL
dNTP mix** (2.5 mM each)	4.0 µL
Primer 1 (100 µM)	0.5 µL
Primer 2 (100 µM)	0.5 µL
EconoTaq (5 U/µL)	0.5 µL
ddH ₂ O	35.5 µL
<hr/>	
Total	50.0 µL

*10-50 ng of plasmid DNA; 50-200 ng of genomic DNA.

** 2.5 mM dNTP Mix, PCR Grade, can be purchased from Lucigen (Cat. No. 30030-1).

Cycling Conditions:		Pre-heat thermal cycler to 94°C.	
		Incubate PCR reactions 2 min. at 94°C.	X 1 cycle
Denature	15-30 sec.	at 94°C	X 25 cycles
Anneal***	15-30 sec.	at 50-65°C	
Extend	1 min./kb	at 72°C	
Final Extension	5-10 min.	at 72°C	X 1 cycle
Hold	Indefinitely	at 4°C	

***Anneal at T_m of primer ± 2°C.

EconoTaq DNA Polymerase has low activity at room temperature, and its activity increases as the temperature is raised to 72°C. It does NOT have “hot-start” features.

PLEASE NOTE

Some applications in which Lucigen’s EconoTaq DNA Polymerase can be used may be covered by patents issued and applicable in the United States and certain other countries. Because purchase of this product does not include a license to perform any patented application, users of this product may be required to obtain a patent license depending upon the particular application in which the product is used. The PCR process is the subject of European Patent Nos. 201,184 and 200,262 owned by Hoffman-LaRoche. Those patents expired on March 28, 2006. The corresponding PCR process patents in the United States expired on March 29, 2005. It is the sole responsibility of the buyer to ensure that use of the product does not infringe the patent rights of third parties.

Warranty

Lucigen warrants that its products will conform to the standards stated in its product specification sheets in effect at the time of shipment. Lucigen will replace, free of charge, any product that does not conform to the specifications. This warranty limits Lucigen’s liability only to the replacement of the product. THIS WARRANTY IS EXCLUSIVE, AND LUCIGEN MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. The stated express warranties, and the remedy provided for breach thereof, are in lieu of all other liability or obligations of Lucigen for any damages whatsoever arising out of or in connection with the delivery, use, performance, or the inability to use any of its products. IN NO EVENT SHALL LUCIGEN BE LIABLE UNDER ANY LEGAL THEORY (INCLUDING BUT NOT LIMITED TO CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT, OR WARRANTY OF ANY KIND) FOR ANY INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES (INCLUDING BUT NOT LIMITED TO LOST PROFITS). Without limiting the effect of the preceding sentence, Lucigen’s maximum liability, if any, shall not exceed the purchase price paid by buyer for the product.

Copyright© 2016 by Lucigen Corp. All rights reserved. EconoTaq and Lucigen are registered trademarks of Lucigen Corp.

Lucigen Corporation 2905 Parmenter St, Middleton, WI 53562 USA
Toll Free: (888) 575-9695 | (608) 831-9011 | FAX: (608) 831-9012
lucigen@lucigen.com www.lucigen.com