Product Manual

AMPIGENE® Taq DNA Polymerase

Catalog #: ENZ-PRT100

ENZ-PRT100-0500 for 500 units

USE FOR RESEARCH PURPOSES ONLY

Unless otherwise specified expressly on the packaging, all products sold hereunder are intended for and may be used for research purposes only and may not be used for food, drug, cosmetic or household use or for the diagnosis or treatment of human beings. Purchase does not include any right or license to use, develop or otherwise exploit these products commercially. Any commercial use, development or exploitation of these products or development using these products without the express written authorization of Enzo Life Sciences, Inc. is strictly prohibited. Buyer assumes all risk and liability for the use and/or results obtained by the use of the products covered by this invoice whether used singularly or in combination with other products.

LIMITED WARRANTY; DISCLAIMER OF WARRANTIES

These products are offered under a limited warranty. The products are guaranteed to meet all appropriate specifications described in the package insert at the time of shipment. Enzo Life Sciences' sole obligation is to replace the product to the extent of the purchasing price. All claims must be made to Enzo Life Sciences, Inc., within five (5) days of receipt of order. THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES OR LIABILITIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON- INFRINGEMENT OF THE PATENT OR OTHER INTELLECTUAL PROPERTY RIGHTS OF OTHERS, AND ALL SUCH WARRANTIES (AND ANY OTHER WARRANTIES IMPLIED BY LAW) ARE EXPRESSLY DISCLAIMED.

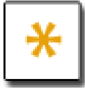
TRADEMARKS AND PATENTS

Several Enzo Life Sciences products and product applications are covered by US and foreign patents and patents pending. Enzo is a trademark of Enzo Life Sciences, Inc.

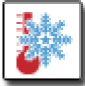
FOR RESEARCH USE ONLY.

THE PRODUCT MAY BE USED ONLY FOR *IN VITRO* RESEARCH PURPOSES.

Product Manual



Please read entire booklet before proceeding with the assay.



Carefully note the handling and storage conditions.

Please contact Enzo Life Sciences Technical Support if necessary.

TABLE OF CONTENTS

Description 2
Shipping and Storage 2
Important Considerations 3
Reaction Setup 4
Contact Information 6

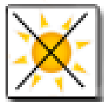
DESCRIPTION

AMPIGENE® Taq DNA Polymerase uses the latest developments in polymerase technology and buffer chemistry to enhance PCR speed, yield and specificity. The enzyme and buffer system allow for superior PCR performance on complex templates such as mammalian genomic DNA.

AMPIGENE® Taq is a robust enzyme for all your everyday PCR applications including genotyping, screening and library construction. AMPIGENE® Taq DNA Polymerase can perform consistently well on a broad range of templates (including both GC and AT rich).

AMPIGENE® Taq DNA Polymerase has an error rate of approximately 1 error per 2.0 x 10^5 nucleotides incorporated. PCR products generated with AMPIGENE® Taq DNA Polymerase are A-tailed and may be cloned into TA cloning vectors.

Component	500 units
AMPIGENE® Taq DNA polymerase (5 u/µL)	1 x 100 µL
5x AMPIGENE® reaction buffer	4 x 1 mL



Protect from prolonged exposure to light.

SHIPPING AND STORAGE

On arrival the kit should be stored at -20°C. Avoid prolonged exposure to light. If stored correctly the kit will retain full activity for 12 months. The kit can be stored at 4°C for 1 month. The kit can go through 30 freeze/thaw cycles with no loss of activity.

IMPORTANT CONSIDERATIONS

5x AMPIGENE® Reaction buffer: The 5x reaction buffer contains 15 mM $MgCl_2$, 5 mM dNTPs, enhancers and stabilizers. It is not recommended to add further PCR enhancers or $MgCl_2$ to the reaction. The buffer composition has been optimized to maximize PCR success rates.

Template: For eukaryotic DNA use between 5 ng and 500 ng per reaction, for cDNA use below 100 ng per reaction.

Primers: Primers should have a predicted melting temperature of around 60°C. The final primer concentration in the reaction should be between 0.2 µM and 0.6 µM.

Annealing: We recommend performing a temperature gradient to experimentally determine the optimal annealing temperature. Alternatively, we recommend a 55°C annealing temperature then increase in 2°C increments if non-specific products are present.

Extension: Optimal extension is achieved at 72°C. The optimal extension time is dependent on amplicon length and complexity of template. 15 seconds per kilobase (kb) is recommended for amplification from eukaryotic DNA for amplicons between 1kb and 6kb. For shorter amplicons a 1 second extension is sufficient.

REACTION SETUP

1. Prepare a master mix based on the following table:

Reagent	50 µL reaction	Final concentration	Notes
5x AMPIGENE® Reaction buffer	10.0 µL	1x	
Forward primer (10 µM)	2.0 µL	400 nM	See above for optimal primer design
Reverse primer (10 µM)	2.0 µL	400 nM	
Template DNA	<100 ng cDNA, <500 ng genomic	variable	See above for template considera-tions
AMPIGENE® Taq DNA polymerase (5 u/µL)	0.25 µL - 1.0 µL		
PCR grade dH_2O	Up to 50 µL final volume		

2. Cycle using conditions based on the following table:

Cycles	Temperature	Time	Notes
1	95°C	1 min	Initial denaturation
40	95°C 55°C to 65°C 72°C	15 seconds 15 seconds 1-90 seconds	Denaturation Anneal Extension (15 seconds per kb)

NOTES

GLOBAL HEADQUARTERS
Enzo Life Sciences Inc.
10 Executive Boulevard
Farmingdale, NY 11735
Toll-Free:1.800.942.0430
Phone:631.694.7070
Fax: 631.694.7501
info-usa@enzolifesciences.com

EUROPE/ASIA
Enzo Life Sciences (ELS) AG
Industriestrasse 17
CH-4415 Lausen
Switzerland
Phone:+41/0 61 926 89 89
Fax:+41/0 61 926 89 79
info-ch@enzolifesciences.com

For local distributors and detailed product information visit us online:
www.enzolifesciences.com