



DyNAzyme™ I DNA Polymerase, Native Enzyme

F-500S/L

100 U/500 U 2.0 U/μl

Store at -20°C

DyNAzyme™ I is a thermostable DNA polymerase. It is isolated and purified from an *E.coli* strain carrying a plasmid with the cloned DyNAzyme DNA Polymerase gene from *Thermus brockianus* (Finnzymes' proprietary strain). DyNAzyme I DNA Polymerase has a half life of 3 hours at 96°C. DyNAzyme I DNA Polymerase possesses the following activities: 5'→3' DNA polymerase activity and 5'→3' exonuclease activity. DyNAzyme I DNA Polymerase lacks the 3'→5' proofreading activity, which makes it easy to use. DyNAzyme I DNA Polymerase is purified free of contaminating endo- and exonucleases.

Storage buffer: 20 mM Tris-HCl (pH 7.4 at 25°C), 0.1 mM EDTA, 1 mM DTT, 100 mM KCl, stabilizers, 200 μg/ml BSA and 50 % glycerol.

Reaction buffer: DyNAzyme I DNA Polymerase is supplied with 10x Optimized DyNAzyme Buffer (1 x is 10 mM Tris-HCl (pH 8.8 at 25°C), 1.5 mM MgCl₂, 50 mM KCl, 0.1 % Triton X-100).

Unit definition: One unit is defined as the amount of enzyme that will incorporate 10 nmoles of dNTPs into acid-insoluble form at 74°C in 30 minutes under the stated assay conditions.

Unit assay conditions: Incubation buffer: 25 mM TAPS-HCl, pH 9.3 (at 25°C), 50 mM KCl, 2 mM MgCl₂, 1 mM β-mercaptoethanol, 100 μM dCTP, 200 μM each dATP, dGTP, dTTP. Incubation procedure: 20 μg activated calf thymus DNA and 0.5 μCi [α-³²P] dCTP are incubated with 0.1 units DNA polymerase in 50 μl incubation buffer at 74°C for 10 minutes. The amount of incorporated dNTPs is determined by trichloroacetic acid precipitation.

Exonuclease activity: Incubation of 10 U for 4 hours at 72°C in 50 μl assay buffer with 1 μg sonicated ³H ssDNA (2x10⁵ cpm/μg) released < 1 % of radioactivity.

Endonuclease assay: No endonuclease activity is observed after incubation of 10 U of DNA polymerase with 1 μg of λ DNA or λ-*Hind*III DNA fragments in assay buffer at 72°C for 4 hours.

Caution: Repeated freezing and thawing of the enzyme may result in decreased activity of the polymerase. If the enzyme is frequently used, we recommend storage in refrigerator at +4°C or division into 100 U aliquots which then should be stored at -20°C. Stable for one year from the assay date.



WARRANTY

Finnzymes Oy warrants that its products will meet the specifications stated on the technical data section of the data sheets, and Finnzymes Oy agrees to replace the products free of charge if the products do not conform to the specifications. Notice for replacement must be given within 60 days of receipt.

In consideration of the above commitments by Finnzymes Oy, the buyer agrees to and accepts the following conditions:

1. That this warranty is in lieu of all other warranties, express or implied;
2. That **ALL WARRANTIES OF MERCHANT ABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY EXCLUDED AND WAIVED**;
3. That the buyer's sole remedy shall be to obtain replacement of the product free of charge from Finnzymes Oy; and
4. That this remedy is in lieu of all other remedies or claims for damages, consequential or otherwise, which the buyer may have against Finnzymes Oy.

Exclusive terms of sale:

Finnzymes Oy does not agree to and is not bound by any other terms or conditions, unless those terms and conditions have been expressly agreed to in writing by a duly authorised officer of Finnzymes Oy. Prices are subject to change without notice.

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Finnzymes Oy recommends that the buyer and other persons using the products follow the N.I.H. guidelines published in the Federal Register, Volume 41, No. 131, July 7, 1976, and any amendments thereto. Finnzymes Oy disclaims any and all responsibility for any injury or damage which may be caused by the failure of the buyer or any other person to follow said guidelines.

Research Use Only:

Since these products are intended for research purposes by qualified persons, the Environmental Protection Agency does not require us to supply Premanufacturing Notice.

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The information presented here is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Nothing herein is to be construed as recommending any practice or any product in violation of any patent or in violation of any law or regulation. It is the user's responsibility to determine for himself or herself the suitability of any material and/or procedure for a specific purpose and to adopt such safety precautions as may be necessary.

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