

www.rojetechnologies.com





Hy-Taq Polymerase

For DNA Amplification

**By ROJE
Edition, 01/2022**



ROJETechnologies has been founded since 2014, and manufactures a wide range of molecular biology kits. We research, develop and create our products in order to make easier and more comfortable approaches to do research in molecular biology. Our target is offering high-quality affordable Molecular and diagnostic Kits and reagents, comparable of the world leaders, to research centers, laboratories, clinics, hospitals and diagnostic centers all over the world.



Contents

| | |
|--|---|
| Kit Content | 4 |
| Storage | 4 |
| Intended Use | 4 |
| Guarantee & Warranty | 4 |
| Notice to Purchaser | 4 |
| Warning and Precautions | 4 |
| Quality Control | 5 |
| Recombinant Taq DNA Polymerases | 5 |
| Description | 5 |
| Features | 5 |
| Prepare PCR Reactions | 6 |
| Tips for Optimizing PCR Reaction | 7 |
| Ordering Information | 7 |
| Technical Assistance | 7 |
| Factory address | 8 |

Kit Content

Hy-Taq Polymerase (Concentration: 5 units/ μ l)

| Component | 250 Units |
|---|------------|
| Hy-Taq Polymerase, Recombinant (5U/ μ l) | 50 μ l |

Storage

Shipment condition is checked by ROJETechnologies. After arrival, all components should be kept dry at -20 °C. When storage condition is as directed, all components are stable until expiration date, as indicated on the kit box.

Intended Use

Notice that, these products are intended for molecular biology applications not for diagnostic use. We recommend all users to study RNA experiments guideline, before starting their work.

Guarantee & Warranty

ROJETechnologies guarantees the efficiency of all manufactured kits and reagents. For more information on choosing proper kits based on your needs, please contact our technical support team. If any product does not satisfy you, due to reasons other than misuse, please contact our technical support team. If problem is due to manufacturing process, ROJE team will replace the Kit for you.

Notice to Purchaser

These products are only for experiments and not for commercial use in any kind. No right to resell them or any components. For information about our licensing or distributors contact ROJE business team.

Warning and Precautions

Due to chemical material usage that may be hazardous, always make sure to wear suitable lab coat, disposable gloves, and protective eyewear. Material Safety Data Sheet (MSDS) for all products and reagents are provided. They are accessible online at www.rojetechnologies.com

Quality Control

All ROJETechnologies products are tested against predetermined experiments on a lot-to-lot basis according to ROJETechnologies ISO-certified quality management system, to ensure consistent product quality. For your information, the results of all experiments are accessible by addressing REF and Lot number on web at www.rojetechnologies.com

Recombinant Taq DNA Polymerases

Description

Recombinant Hy-Taq polymerase is purified from *E. coli* expressing cloned DNA polymerase from *Thermus aquaticus*. The enzyme consists of a single polypeptide with molecular weight of approximately 94kDa. It has 5'-3' DNA polymerase activity and 5'-3' exonuclease activity. It lacks 3'-5' exonuclease activity. This enzyme is suitable for routine amplification. For better comparison of these two sets refer to Table 1.

Features

Specific features of PCR enzymes are listed here in Table 1.

Table 1. Comparison between ROJE Taq and Pfu polymerase

| Feature | Kit Name | Hy-Taq Polymerase ² | Hy-Fidelity Pfu Polymerase |
|---|----------|--------------------------------|----------------------------|
| | | | |
| Fidelity¹ | | 2 | 54 |
| Expression rate | | 6 kb/min | 2-4 kb/min |
| Amplification of genomic DNA fragment up | | 4 kb | 15 kb |
| Amplification of plasmid DNA fragment up | | — | 20 kb |
| Hot-start | | No | Yes |
| Applications | | | |
| Short fragment PCR | | ✓ | ✓ |
| High throughput PCR | | ✓ | × |
| Colony PCR | | ✓ | × |
| High fidelity PCR | | × | ✓ |
| Blunt- end cloning | | × | ✓ |
| Site directed mutagenesis | | × | ✓ |
| Equipment & Reagents to be supplied by user | | | |
| <ul style="list-style-type: none"> • Pipets and pipet tips • Microcentrifuge tube • Thermal cycler • Mineral oil (for thermal cyclers without a heated lid) • Primers | | | |

¹ Compare to Taq DNA Polymerase

² Template-independent 'A' can be generated at the 3' end of PCR product.

Prepare PCR Reactions

The best condition for PCR reactions with Hy-Taq Polymerase is written here.

Table 2. Prepare PCR Reactions, Hy-Taq Polymerase

| Component | Volume |
|---|------------|
| Template | Variable |
| Forward primer (10 µM) | 1µl |
| Reverse primer (10 µM) | 1µl |
| Hy-Taq Polymerase, Recombinant (5U/µl) | 0.5 - 1µl |
| PCR Buffer, 10X, with Mg⁺⁺, optimized for Hy-Taq polymerase | 5µl |
| HiPure-dNTP mix, 2.5 mM | 8µl |
| Water for Molecular Biology, Sterile, Filtered | Up to 50µl |

Tips for Optimizing PCR Reaction

- A final concentration of 2mM MgSO₄ is sufficient for most targets' amplification. For some targets, more Mg²⁺ may be required; use the 50 mM MgSO₄ stock to test from 2mM to 4mM (final concentration) in 0.25mM increments.

Ordering Information

| Category | Product name | Cat NO. | Size |
|----------|---|----------|---------|
| | Hy-Taq Polymerase, Recombinant (5U/µl) | EB983087 | 250unit |

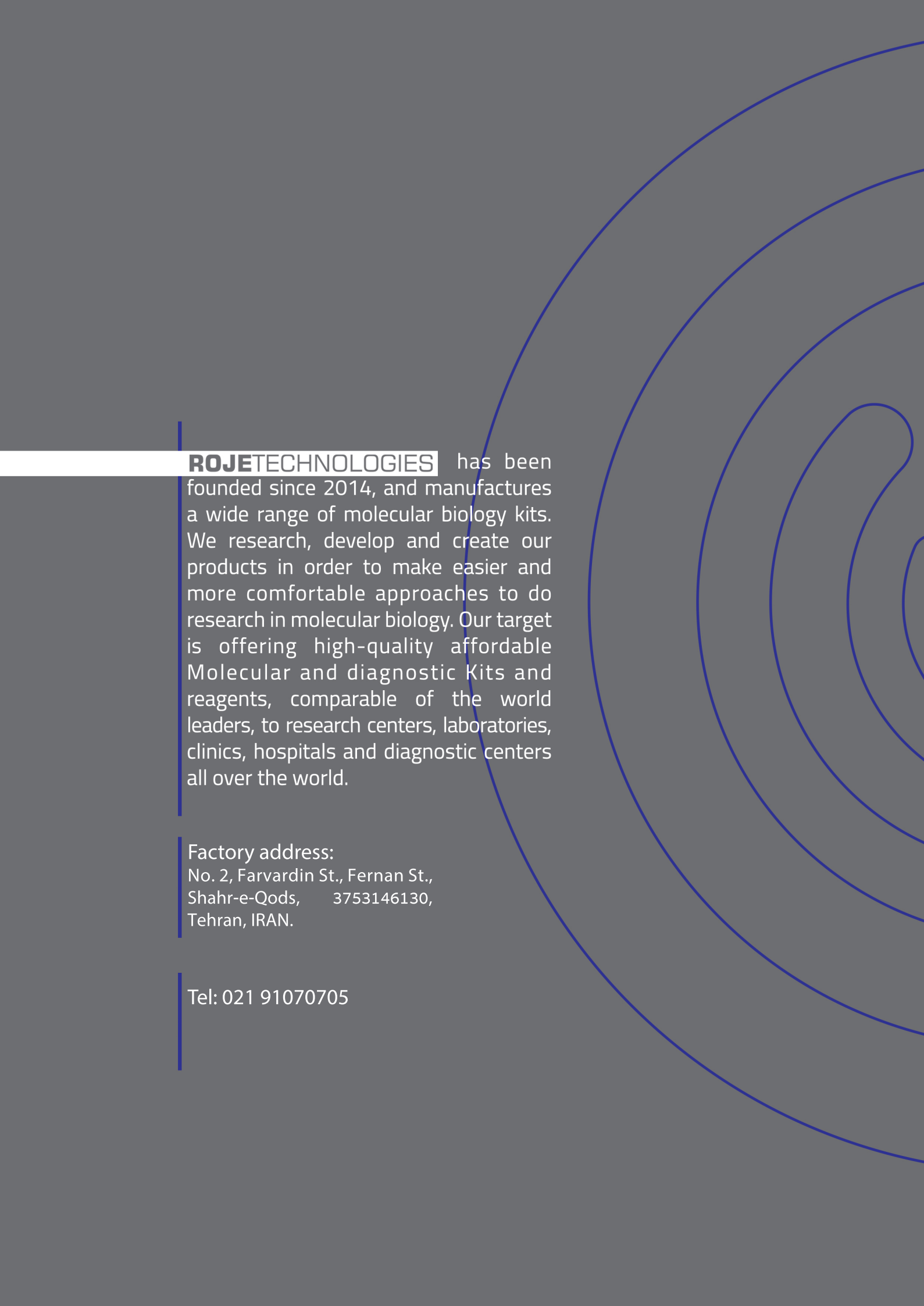
Technical Assistance

- ROJETechnologies guarantee your complete satisfaction. ROJE technical support team is composed of highly trained, experienced scientists; who can troubleshoot most problems you face. Our technical support team can offer expert advice which may help you select a suitable product.
- Contact our technical support at any time by selecting one of these ways:
- Through our telephone and fax number; +982191070705.
- You can submit your question directly to ROJE Technical Support Team from our website (www.ROJETechnologies.com)
- Or send your questions to this email address, technicalsupport@rojetechnologies.com.



Factory address

NO. 2 Farvardin street- Fernan Street- Tehran- Shahr Qods- Iran- Postal Code: 37531146130-
phone: +982191070705



ROJETECHNOLOGIES has been founded since 2014, and manufactures a wide range of molecular biology kits. We research, develop and create our products in order to make easier and more comfortable approaches to do research in molecular biology. Our target is offering high-quality affordable Molecular and diagnostic Kits and reagents, comparable of the world leaders, to research centers, laboratories, clinics, hospitals and diagnostic centers all over the world.

Factory address:
No. 2, Farvardin St., Fernan St.,
Shahr-e-Qods, 3753146130,
Tehran, IRAN.

Tel: 021 91070705