


PCR enzymes

for Molecular Diagnostics





Who
We Are

Why
NanoHelix?

Raw Materials
for MDX

Core
Technology

Reliable Partner for DNA Technologies

Who We Are

NanoHelix Co., Ltd. is a global provider of highly qualified molecular biological reagents and raw materials for molecular diagnostics. We were established in December 2008 to develop, manufacture, and market the state-of-art laboratory reagents. We also specialize in customized development and contract manufacturing of enzymes for molecular diagnostics.

Contract Manufacturer | Custom Development | OEM Business

Why NanoHelix?





Advanced Technology

Due to continuous and intensive investment in R&D, NanoHelix Co., Ltd. develops innovative technologies and products for **molecular diagnostics**; PMT Technology, Fast Real-time PCR, FMMA (Fluorescence-based multiple melting assay), and novel POC NA purification technology (Punch-it™ NA-Sample Kit). These novel and proprietary technologies would be applied to the custom diagnostic kits to enhance their performances and develop cutting-edge products.



Certified Management & Quality Assurance System

ISO 13485:2016 certified management and quality assurance system, combined with our dedicated professional staff, ensure our products' quality, which measures up to the highest standards. All of the procedures associated to R&D, manufacturing and QC/QA are following the certified NanoHelix's Management and Quality Assurance system.



High Production Capability

NanoHelix manufactures 20+ different enzymes and proteins routinely.

In the case of *Taq* polymerase, we produce more than **30 million units in a week** and have an annual manufacturing capacity of **1.5 billion units**.



Over ten (10) years' experiences with hundreds of custom development

As your custom development partner, **NanoHelix leverages over ten years' experiences**, resources, and expertise to provide molecular diagnostic enzymes optimized for a wide range of special applications.

“ Raw Materials for MDx

Customized Molecular Diagnostic Enzymes & Kits

Fast Real-time PCR / RT-PCR

Multiplex Real-time PCR / RT-PCR

Direct Real-time PCR / RT-PCR



PCR enzymes for MDx

- *Taq* polymerase
- *Taq* polymerase glycerol-free
- *Hot-Taq* polymerase
- *Hot-Taq* polymerase glycerol-free
- *Ab+Taq* polymerase
- *Premium-Taq* polymerase

Enzymes for Molecular Diagnostics

- *Thermo* Reverse Transcriptase
- Uracil DNA Glycosylase
- Heat Labile UDG
- RNase Inhibitor (Recombinant)
- *Bst* DNA polymerase, Large fragment
- *Phi29* DNA polymerase

Conventional PCR / RT-PCR Premixes

- Multiplex PCR 2x Premix
- *Taq* 2x Premix
- *Hot-Taq* 2x Premix
- *Ab+Taq* 2x Premix
- One-Step RT-PCR Kit [*Hot-Taq*]
- One-Step RT-PCR Kit [*Ab+Taq*]

Real-Time PCR Premixes

- 2x qPCR Premix [Green]
- 2x qPCR Premix [Probe]
- Premier 2x qPCR Mix [Green]
- 1-Sec qPCR Kit [Probe]
- Superplex qPCR Premix [Probe]

Real-Time RT-PCR Premixes

- qRT-PCR Kit [Green]
- qRT-PCR Kit [Probe]
- 1-Sec qRT-PCR Premix [Probe]

Direct PCR / RT-PCR

- Direct PCR [3G]
- Direct RT-PCR
- Direct qPCR [Green]
- Direct qPCR [Probe]

Isothermal Amplification

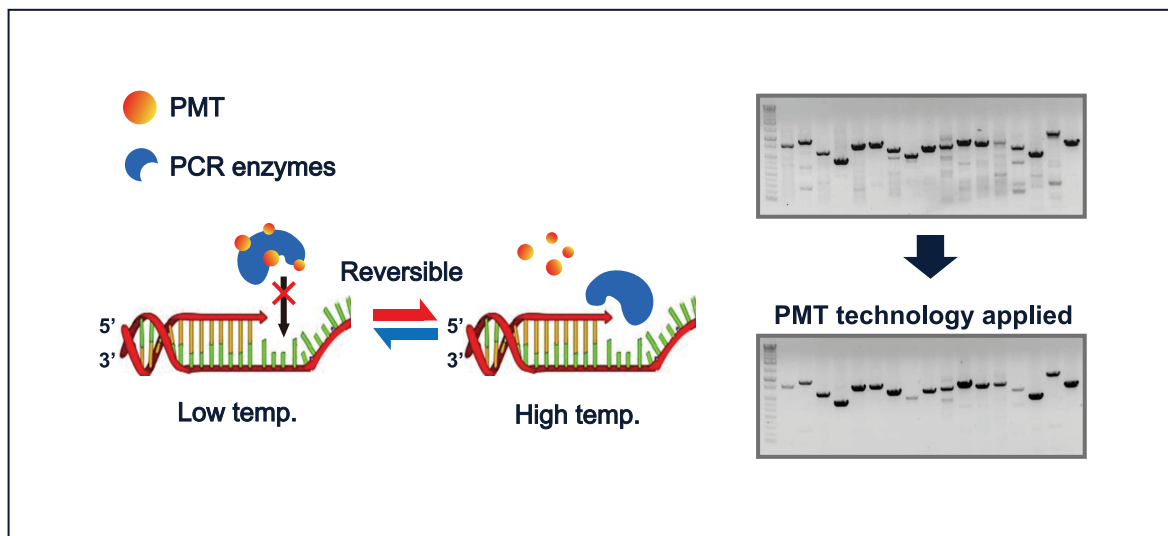
- FastLAMP Kit

Core Technology



PMT Technology

- PMT is a chemical that maximizes the effect of the hot-start PCR
- Reversible according to temperature
- High specific amplification and minimize the primer-dimer formation



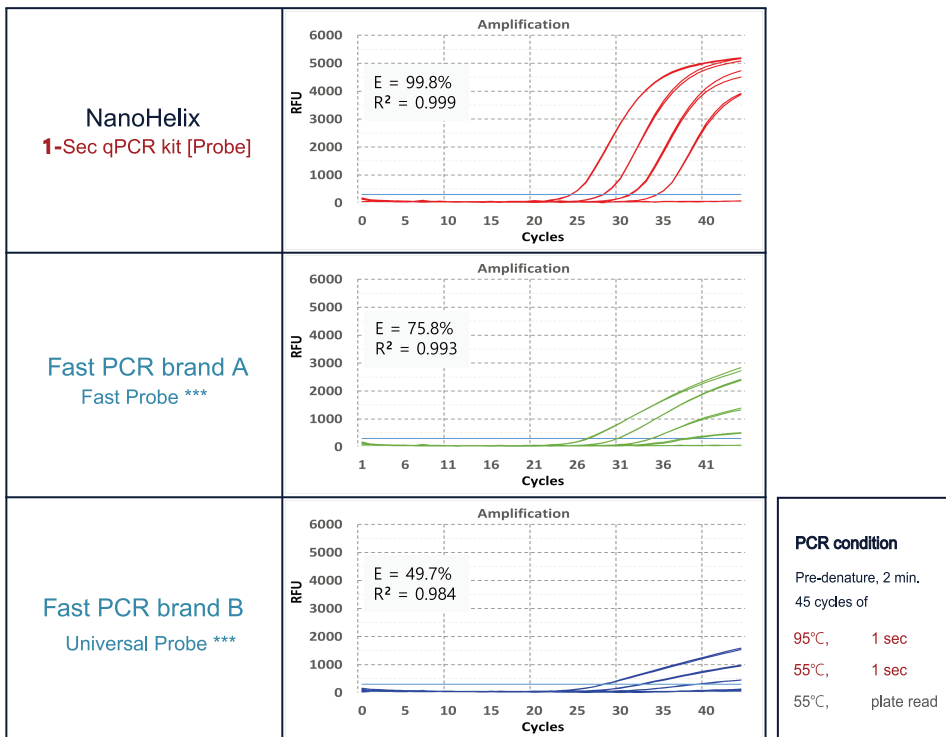
Polymerase Modulator on Temperature (PMT) technology, a novel PCR technology for high specific amplification and minimize the primer-dimer formation.

Fast Real-time PCR

- Probe-based real-time PCR kit
- Fast real-time assay: 30 ~ 40 min for 40 cycles
- Multiplex: up to 5-plex probe qPCR in a reaction
- Fast, Specific, Sensitive and Reliable
- Unique buffer system and antibody-mediated hot-start enzyme

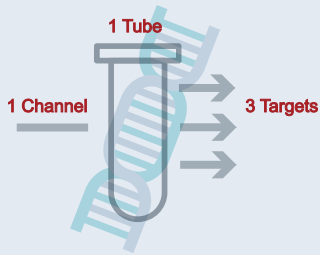


RealHelix™ 1-sec qPCR [Probe] and RealHelix™ 1-sec qRT-PCR [Probe] provide speedy results without compromising the data quality. It takes around 30 minutes to run 35 cycles.



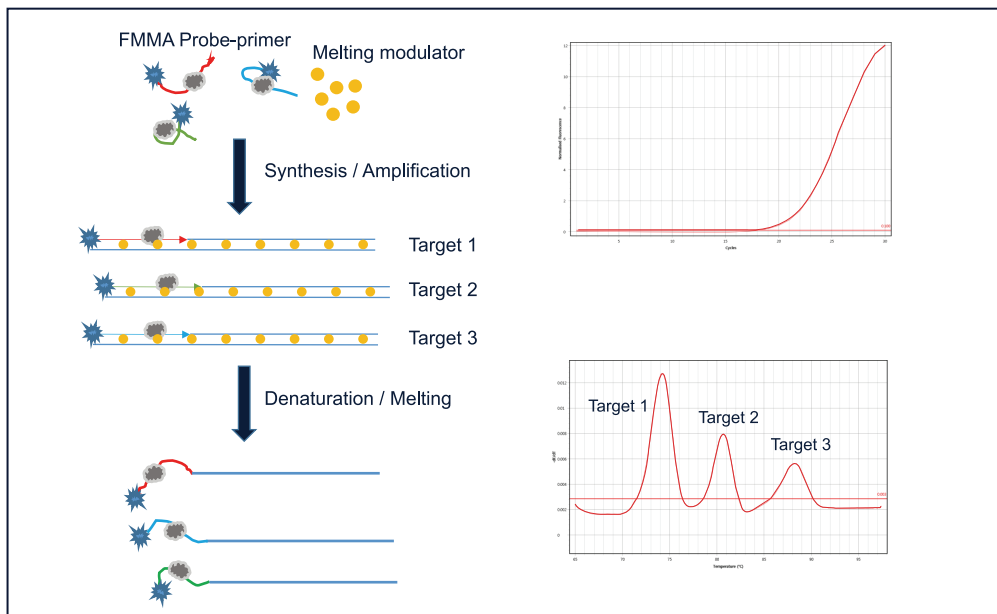
FMMA

Fluorescence-based multiple melting analysis



- Single-Channel, Multiple target detection in a real-time PCR machinery
- 10+ target detection in a reaction
- Relatively sharp melting peak (narrow peak base)
- Wide range of T_m distribution; 70°C ~ 95°C

FMMA is a NanoHelix's novel technology for super-plex target identification in a single real-time PCR reaction. FMMA provides multi-target detection in a single fluorescence channel, and more than ten (10) targets could be analyzed using multiple melting analysis in a reaction. This technology is currently patent pending and could be applied to any multiplexing MDx including pathogen detection, genotyping, SNP analysis, food ingredients analysis, GMO detection, etc.

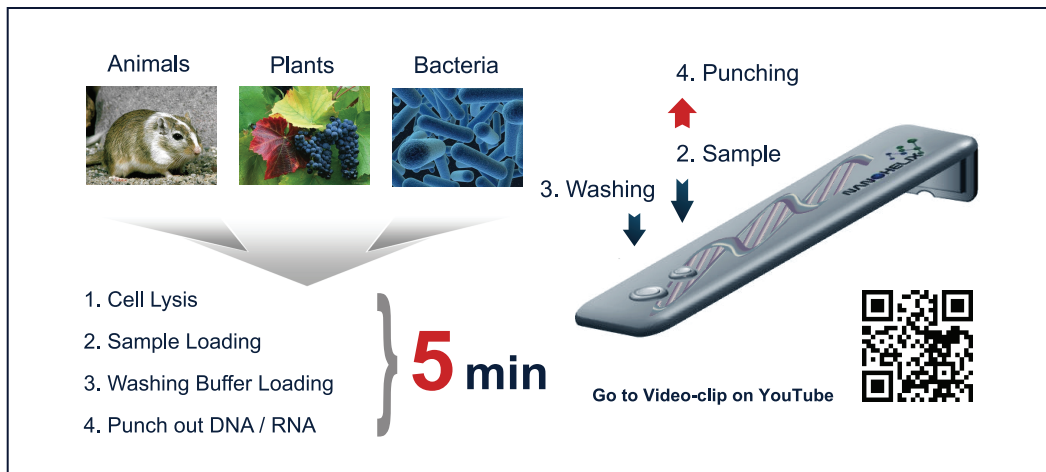


Punch-it™ NA-Sample Kit

- Novel POC nucleic acid sample preparation kit
- Easy to handle and does not need an electric instrument
- Total 5 min handling time to obtain DNA and RNA
- Direct preparation of nucleic acid for molecular diagnostics

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Punch-it™ NA-sample Kit is designed for straightforward isolation of nucleic acid from a little amount of biological samples such as animal tissues, plant tissues, blood, serums, swabs, water, soil, bacteria, viruses, etc. It is easy to handle and does not need any equipment. This kit is suitable for the direct preparation of nucleic acids for molecular diagnostics using PCR or RT-PCR technologies.

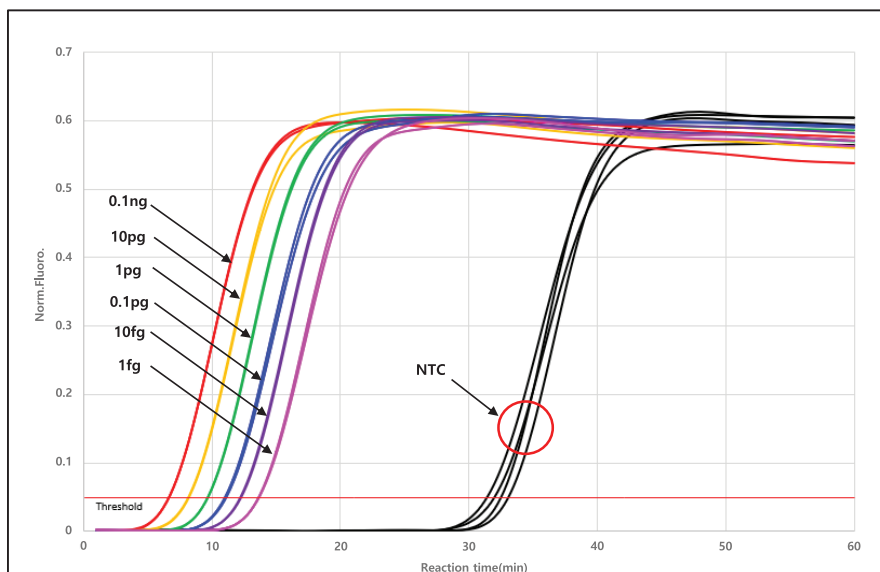


FastLAMP Kit

- *Bst* DNA polymerase-based isothermal DNA amplification
- Rapid time to result: Less than 15 min
- Sensitivity and Accurate
- Applicable to point-of-care molecular diagnostics



HelixAmp™ FastLAMP Kit is designed to provide a simple and faster solution for Loop-Mediated Isothermal Amplification (LAMP) of DNA targets. LAMP is an isothermal amplification technique that provides rapid detection of target nucleic acids. The 2x FastLAMP Buffer contains buffering reagents, dNTPs, Mg²⁺, salts, and proprietary enhancing agents. The FastLAMP Enzyme is a derivative of *Bst* DNA polymerase, large fragment.

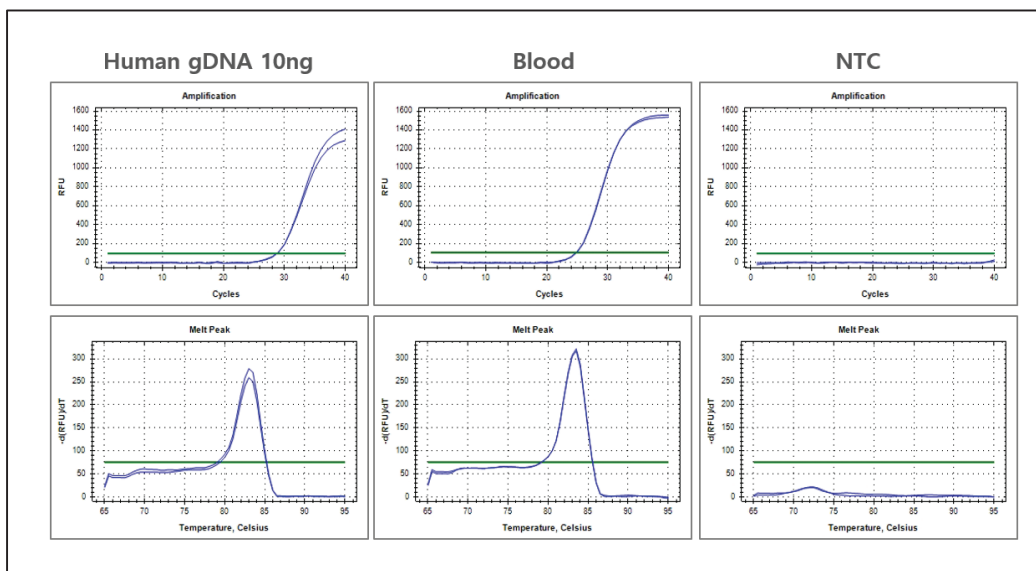


Direct qPCR

- Real-time amplification DIRECTLY from whole blood, animal, and plant tissues
- Skip DNA purification
- Available to intercalating dyes and probes
- TIME and COST saving
- POC DIAGNOSTIC application

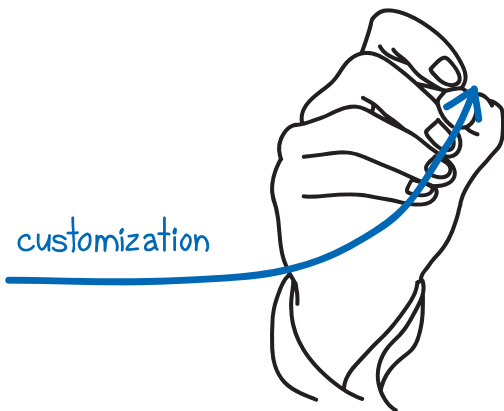


RealHelix™ Direct qPCR Kits are designed for quantitative real-time amplification directly from animal tissues, plant tissues, and various clinical samples, including whole blood, serum, urine, hair, and swab collections without any DNA purification processes. RealHelix™ Direct qPCR Kits contain antibody-coupled hot-start *Taq* DNA polymerase, dNTPs, MgCl₂, stabilizer, and unique buffer system to resist various PCR inhibitors from tissue samples. RealHelix™ Direct qPCR Kit is an ideal system for rapid on-site molecular diagnostics.





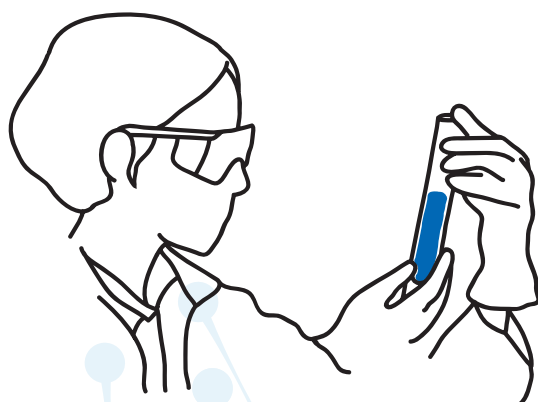
Services



Custom Development

Are you looking for free customization and how to saving raw material cost?

If you need customization of your PCR based MDx kit and saving raw material cost of PCR/Real-time PCR enzymes working with NanoHelix is the smart choice.



OEM Supply

Production line can meet your requests for packaging under the logos you want.

NanoHelix's production line can meet your requests for packaging under the logos you want. If you want to add molecular biological reagents to your product portfolio without increasing the production line, consider the OEM supply from NanoHelix.


For bulk users we can supply any amount of our products at very affordable prices and a Q.C certificate for each batch.




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