The Synthesis of Scientific Innovation, Quality, and Value

Unveiling NZYTech's Portfolio of Over 160 qPCR & RT-qPCR Kits



Whitepaper

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✓ >160 qPCR Kits

- ✓ Lyophilized for shipping at room temperature
- ✓ All Kits Ready to Ship

✔ Veterinary and Human

- ✔ Bulk Orders Available
- ✓ ISO 9001 and ISO 13485

Introduction

Pathogens

In the dynamic field of molecular diagnostics, NZYTech is dedicated to crafting novel innovative solutions, harnessing the latest scientific advances to produce an expansive portfolio of over 160 gPCR and RT-gPCR diagnostic kits.

These offerings reflect a blend of cutting-edge scientific innovation, superior quality, and competitive pricing, aiming to provide robust and efficient diagnostic solutions for human clinical diagnostics, veterinary and food testing, and pharmaceutical assurance. Utilizing the well-established gPCR technology, NZYTech's kits bridge the gap between quality, value, and state-of-the-art developments in molecular diagnostics.

As a demonstration of our commitment to scientific advancement, we cater to a diverse range of requirements with our meticulously designed products. This white paper delves into the unique value proposition of NZYTech's contributions and their role in serving the future of molecular diagnostics.

NZYTech's Portfolio: Unmatched Scope and Diversitv

NZYTech, committed to continually pushing the boundaries of scientific innovation, proudly presents a diverse portfolio of over 160 carefully designed gPCR and RT-gPCR diagnostic kits

Our goal is to provide comprehensive solutions that effectively cater to a wide array of diagnostic needs in various fields. Currently, our kits are extensively employed in the realm of human clinical diagnostics, available in both In vitro Diagnostics (IVD) and non-IVD variants.

Complementing this, we have conscientiously developed kits to address the challenging and ever-evolving landscape of veterinary testing. NZYTech's diverse range of kits targets an expansive array of pathogens, making them highly relevant and useful tools not only in human and veterinary diagnostics, but also in agriculture, food, feed, and water safety sectors. In the pharmaceutical industry, where stringent monitoring for pathogen contamination is paramount, our kits serve as efficient tools to facilitate rigorous Quality Control measures.

By providing a broad spectrum of diagnostics, we stand committed to serving our partners across multiple domains, all the while maintaining our focus on quality, precision, and reliability.

MKT-098 V01/2023





R&D, Team and Technology: The Backbone of NZYTech's Molecular Diagnostic Kits

At the nucleus of NZYTech's molecular diagnostic kits development lies a cohesive team of experienced scientists. Utilizing their extensive knowledge and inventive approach, they have led the advancement of products that effectively harness the potential of the widely recognized qPCR technology.

Designed with the aim to offer reliable, specific, sensitive, solutions, NZYTech's kits embody the intrinsic characteristics of qPCR technology, ensuring reproducible and trustworthy results. The detection capacity of these kits is exemplified in Figure 1, demonstrating their consistent performance across a broad spectrum of pathogen concentrations.



Figure 1. Sensitivity of NZYTech Chlamydia trachomatis qPCR Kit (A) and Neisseria gonorrhoeae qPCR Kit (B). Amplification plot (cycle number versus fluorescence – Δ RN) and the respective standard curve (copy number versus Ct) of 1:10 serial dilutions of Chlamydia trachomatis (A) and Neisseria gonorrhoeae (B) Positive Controls, from 1 × 10⁶ copies to 10 copies per reaction through the FAMTM channel. NTC, No Template Control (negative control).





Figure 2. Amplification plot of NZYTech Respiratory Syncytial virus RT-qP-CR Kit (A) and Porcine Epidemic Diarrhea virus & Swine Delta coronavirus RT-qPCR Kit (B)

A) Blue curve: detection of the RSV target through the FAM channel; Green curve: detection of Internal Extraction Control (IEC) through the HEX channel.

B) Blue curve: detection of the PEDV target through the FAM channel; Orange curve: detection of SDCV target through HEX channel; Green curve: detection of Internal Extraction Control (IEC) through the Cy5 channel. NZYTech's proficiency in enzyme technology and engineering serves as the cornerstone of our kit design. Our kits integrate the latest advancements in enzyme master mix technology, striving to deliver enhanced sensitivity alongside consistent and reproducible results. Employing novel methodologies, we have succeeded in reducing the limits of detection, hence, amplifying the sensitivity whilst sustaining consistent outputs across diverse pathogen titers.

This reflects our design goal to enhance the reliability of your tests. Moreover, our kits exploit the capability of multiplexing, a valued feature in modern diagnostics enabling the concurrent detection and quantification of multiple targets. By detecting well-balanced internal extraction controls along-side specific targets, the kits offer a comprehensive overview of the testing conditions, thereby facilitating the delivery of reliable diagnostics (Figure 2).

Additionally, NZYTech has developed a comprehensive range of Endogenous Control Real-time PCR Kits, meticulously tailored for the precise in vitro detection of the most prevalent host species. With NZYTech's diagnostic kits, we strive to provide our partners with a tool that epitomizes dedication, innovation, and reliability, serving as a valuable addition to your molecular diagnostics toolkit.



Production Standards and Quality Assurance: Ensuring Reliability and Precision

NZYTech's qPCR and RT-qPCR diagnostic kits are generated following the guidelines of ISO9001 and ISO13485 standards, ensuring a high level of quality control.

Our cutting-edge production facilities, characterized by meticulous precision and consistent quality, are where NZYTech's diagnostic solutions come into existence. Each component of our kits is produced with a focus on purity and performance, aimed at minimizing the potential for false positive or negative results.

This high level of production integrity is achieved by our highly skilled and dedicated team of scientists and technicians, who bring together expertise and commitment to every aspect of kit production. We employ rigorous quality control procedures to confirm that all batches of our kits meet the demanding requirements of molecular diagnostic testing.

Furthermore, our production facilities are equipped to cater to custom orders, including those requiring larger quantities. Arrangements for bulk orders can be made upon request, allowing for uninterrupted availability of essential diagnostic supplies. With these systems in place, we ensure our products are not only scientifically robust but also reliable and consistent, allowing you to conduct your testing protocols with confidence.







Cost-Effectiveness and Compatibility: The Value Proposition of NZYTech's Kits

Cost-effectiveness plays a pivotal role in modern diagnostics, and at NZYTech, we recognize its importance. We have implemented a strategic pricing structure that strikes a balance between high-quality performance and affordability. As a result, our products offer exceptional value without compromising scientific standards. NZYTech's unique advantage lies in our ability to develop and produce all components of the kit in-house.

This vertical integration allows us to streamline processes and optimize costs, enabling us to offer high-quality kits at competitive prices. By leveraging our expertise and control over the entire production chain, we ensure accessibility to a wide range of users, maximizing the reach of our high scientific standards.

Moreover, our qPCR and RT-qPCR diagnostic kits are meticulously engineered to seamlessly interface with a diverse range of gPCR instrument platforms. This design focus prioritizes versatility and adaptability, empowering you to effortlessly integrate our kits into various testing scenarios.

The compatibility of our kits extends beyond instrument interfaces, as they are also designed to accommodate diverse sample types and diagnostic applications. Whether for human clinical diagnostics, veterinary testing, agriculture, or pharmaceutical guality control, our kits deliver comprehensive solutions tailored to different molecular diagnostic needs. By balancing wide compatibility, cost-effectiveness, and high scientific standards, NZYTech's diagnostic kits offer an exceptional value proposition for modern molecular diagnostics.







Lyophilization and Logistics: Ensuring Ease and Efficiency in Shipping

Recognizing the need for efficient logistics in the field of molecular diagnostics, we have adopted lyophilization technology to prepare our diagnostic kits.

Lyophilization, or freeze-drying, is a process that enables the preservation of complex molecular structures without affecting their functionality, allowing the kits to be shipped at room temperature.

This approach ensures that the integrity and performance of the kits remain uncompromised, irrespective of the shipping distance or duration. Lyophilization has additional benefits, such as enhancing the stability of the kits, thus providing a longer shelf life. It also makes the kits more resilient to varying environmental conditions during transportation.



Our lyophilized kits provide an excellent balance of performance, convenience, and robustness, offering you a seamless experience from order to usage. Moreover, our diagnostic kits are prepared for immediate dispatch, minimizing the lead time from order placement to delivery.

At NZYTech, we understand the importance of timeliness in diagnostics and are committed to providing our partners with swift and efficient logistics. With our streamlined processes, downtime is significantly reduced, ensuring your diagnostic operations remain uninterrupted and efficient.







Conclusion

The ethos of NZYTech revolves around commitment to quality, affordability, scientific precision, and attentiveness to customer needs. Our qPCR and RT-qPCR diagnostic kits embody these values, representing our dedication to excellence and marking a significant advancement in molecular diagnostics.

Our diverse portfolio, comprising over 160 carefully developed qPCR and RT-qPCR diagnostic kits, is a testament to our continuous engagement with innovation and to our drive to contribute positively to the future of molecular diagnostics. NZYTech serves as an active participant in the rapidly evolving world of molecular diagnostics, offering robust tools designed to meet diverse needs and rigorous standards.

Behind our diagnostic kits, a dedicated team of experts in R&D, production, and logistics works tirelessly to deliver the best possible diagnostic solutions to our partners. As we move forward, we remain dedicated to the provision of reliable, high-quality diagnostic solutions, facilitating the transition into the next phase of molecular diagnostics.

Explore our Expansive Portfolio of Over 160 Innovative Solutions Today!

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