



# Benchmark Analysis

NZYSupreme qPCR Probe Master Mix vs  
Competitors



**NZYtech**  
genes & enzymes



# NZYSupreme qPCR Probe Master Mix

## VS Competitors



## Setting the Gold Standard for Detection Sensitivity

The NZYtech's NZYSupreme qPCR Probe Master Mix, was benchmarked against a total of 6 market-leading probe master mixes considered to be the gold-standard in qPCR Master Mixes.

Amplification of *rpl27* from mouse cDNA **I**

Amplification of *ACTB* ( $\beta$ -actin) from human gDNA **II**

The premier choice for High Detection Sensitivity, NZYtech's NZYSupreme qPCR Probe Master Mix is an optimized and highly efficient reaction mixture developed for real-time PCR. This master mix was engineered with a dual hot-start enzyme control mechanism to provide the highest detection sensitivity.

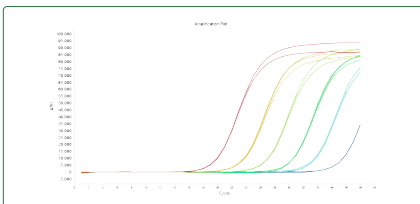


# Amplification of **rpl27** from mouse cDNA

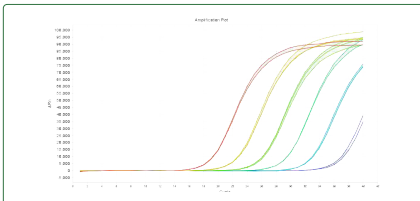
Excellent **linearity** with the NZYSupreme qPCR Probe Master Mix

The performance of the NZYtech's **NZYSupreme qPCR Probe Master Mix** was evaluated specifically for the amplification of **rpl27** from mouse cDNA. Our analysis compared this master mix against six market-leading probe master mixes, renowned as gold standards in qPCR.

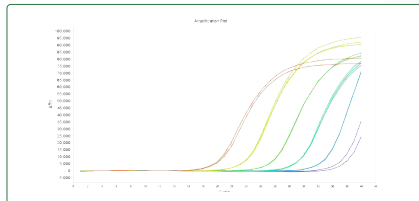
NZYtech | Catalogue number MB416



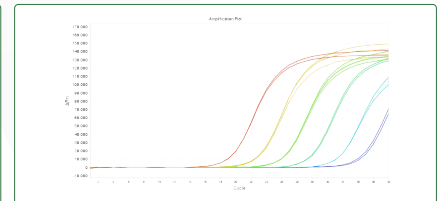
Competitor AB



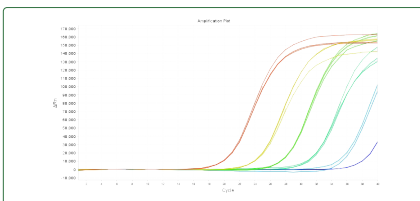
Competitor B



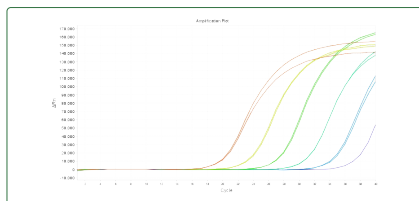
Competitor N



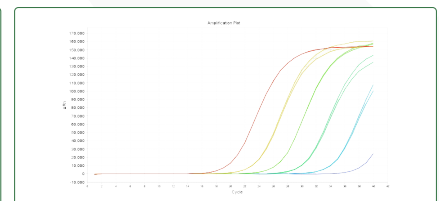
Competitor PB



Competitor P



Competitor Q

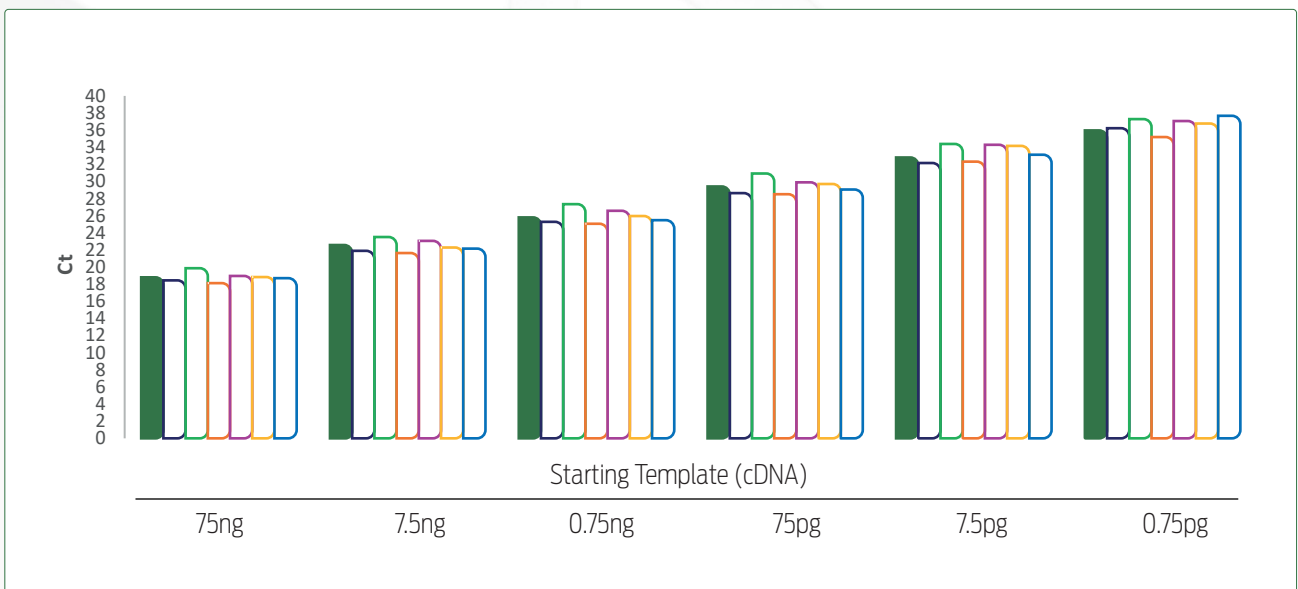


# Comparison of **Ct** values

NZYtech's Supreme qPCR Probe Master Mix: The ultimate blend of **speed** and **sensitivity**

When comparing **NZYSupreme qPCR Probe Master Mix** with a mix from another supplier we strongly recommend amplifying from a **10-fold template dilution series**. Loss of detection at low template concentration is the only direct measurement of sensitivity. An early Ct value is not an indication of good sensitivity, but rather an indication of speed.

	Starting Template (cDNA)					
	75ng	7.5ng	0.75ng	75pg	7.5pg	0.75pg
<b>NZYtech</b>	<b>18,8</b>	<b>22,6</b>	<b>25,8</b>	<b>29,4</b>	<b>32,8</b>	<b>36,0</b>
Competitor AB	18,4	21,9	25,3	28,7	32,2	36,2
Competitor B	19,9	23,5	27,4	31,0	34,4	37,3
Competitor N	18,1	21,7	25,1	28,5	32,3	35,2
Competitor PB	19,0	23,1	26,6	29,9	34,3	37,1
Competitor P	18,9	22,3	26,0	29,7	34,2	36,8
Competitor Q	18,7	22,2	25,5	29,1	33,1	37,7

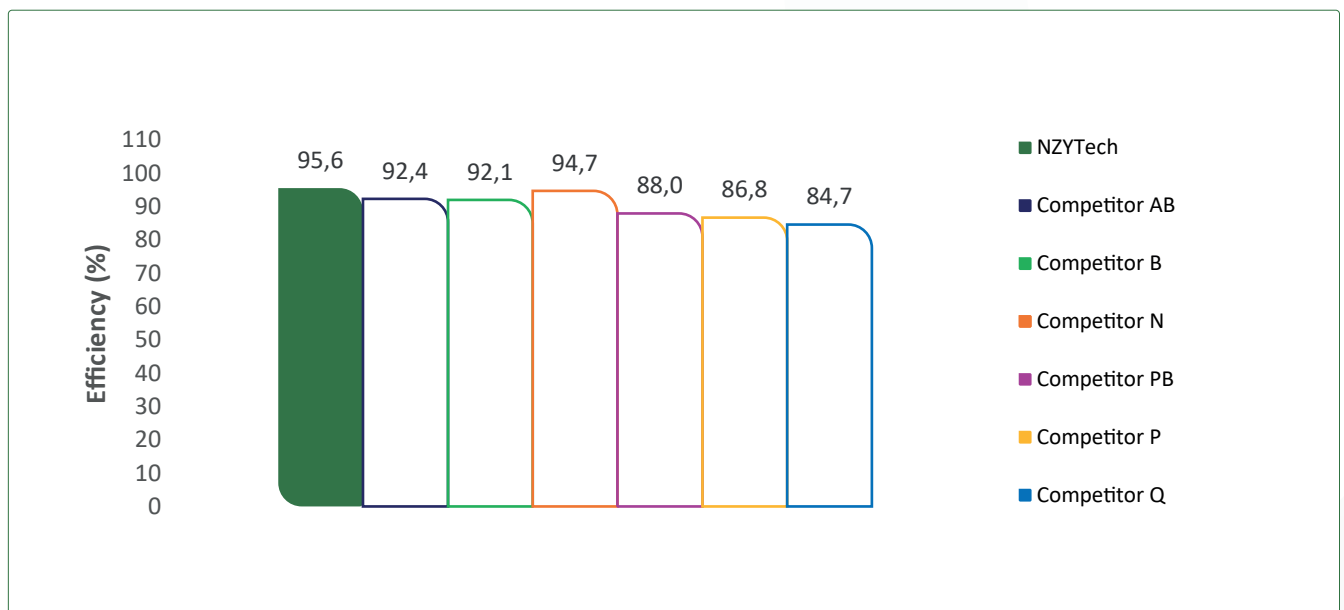


# Comparison of efficiencies

A formidable product designed for **first-class efficiency**

The **NZYSupreme qPCR Probe Master Mix** is an ultra-sensitive master mix, compatible with common real-time platforms. Benchmarked against a total of 6 competitor master mixes considered to be the gold-standard in qPCR Master Mixes, the NZYSupreme qPCR Probe Master Mix proved to be a formidable product with first-class efficiency.

A 10-fold serial dilution of cDNA reverse transcribed from total mouse liver was used as template for a real-time qPCR experiment to detect the *rpl27* housekeeping gene.



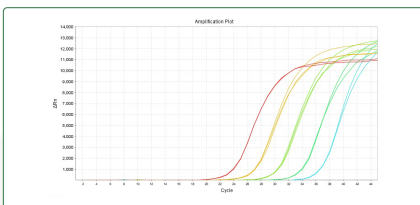


# Amplification of **ACTB ( $\beta$ -actin)** from human gDNA

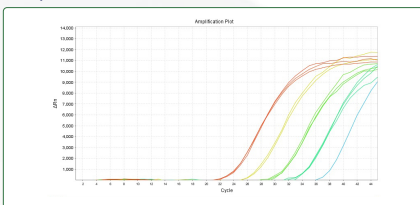
The NZYSupreme qPCR Probe Master Mix demonstrates unrivaled **linearity, reliability** and **sensitivity** even in the most challenging templates

The performance of the NZYtech's NZYSupreme qPCR Probe Master Mix was evaluated specifically for the amplification of ACTB ( $\beta$ -actin) from human genomic DNA. Our analysis compared this master mix against six market-leading probe master mixes, renowned as gold standards in qPCR.

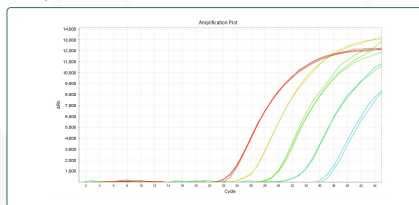
NZYtech | Catalogue number MB416



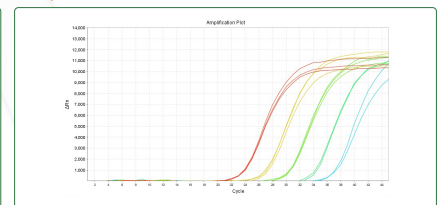
Competitor AB



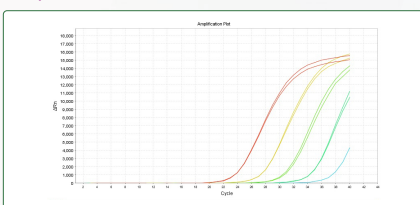
Competitor B



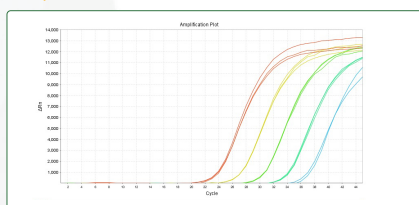
Competitor N



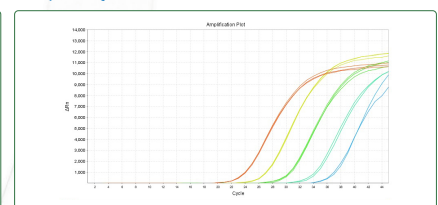
Competitor PB



Competitor P



Competitor Q

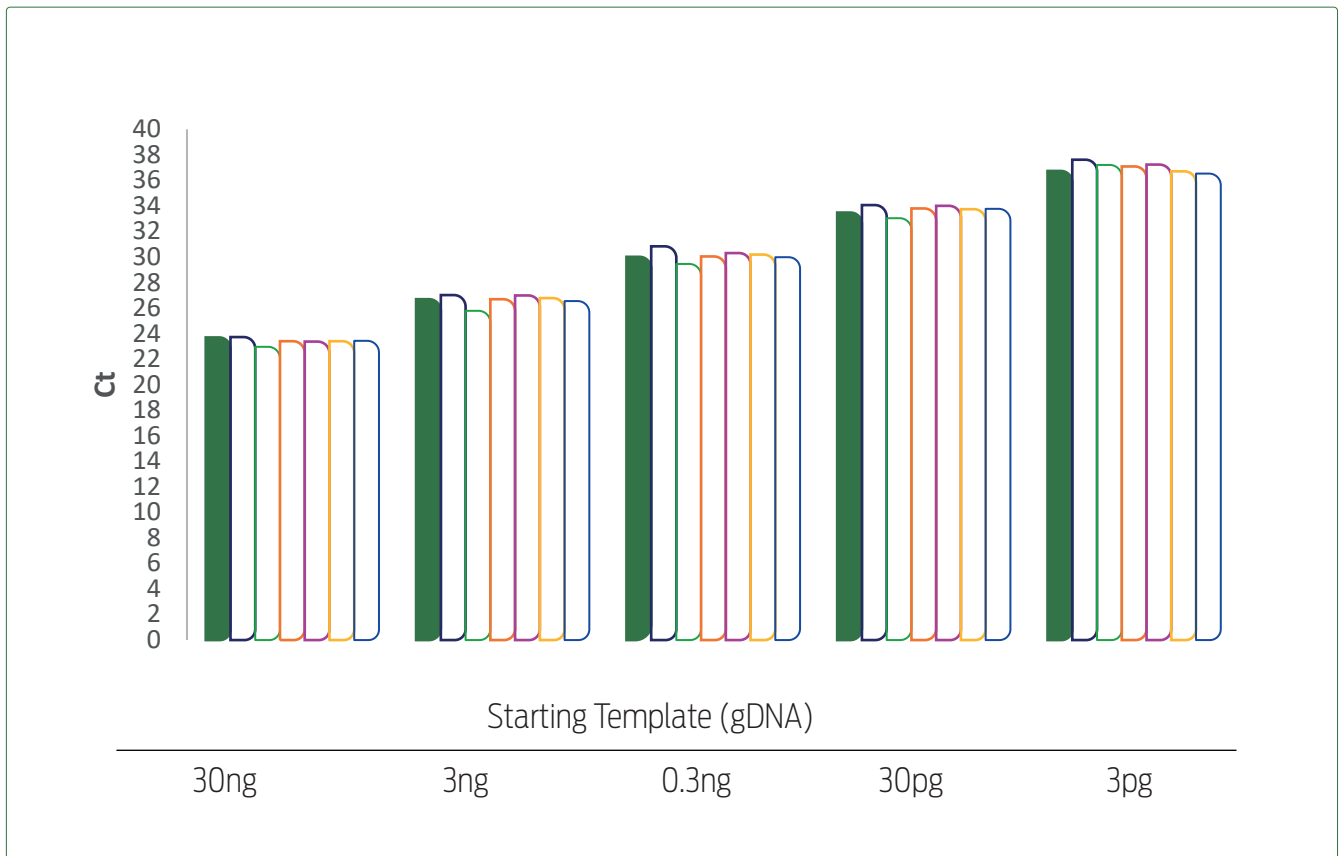


# Comparison of cT values

**Speed and excellent detection** signal confirmed for NZYtech's master mix in amplifications starting from genomic DNA

When comparing NZYSupreme qPCR Probe Master Mix with a mix from another supplier we strongly recommend amplifying from a 10-fold template dilution series. Loss of detection at low template concentration is the only direct measurement of sensitivity. An early Ct value is not an indication of good sensitivity, but rather an indication of speed.

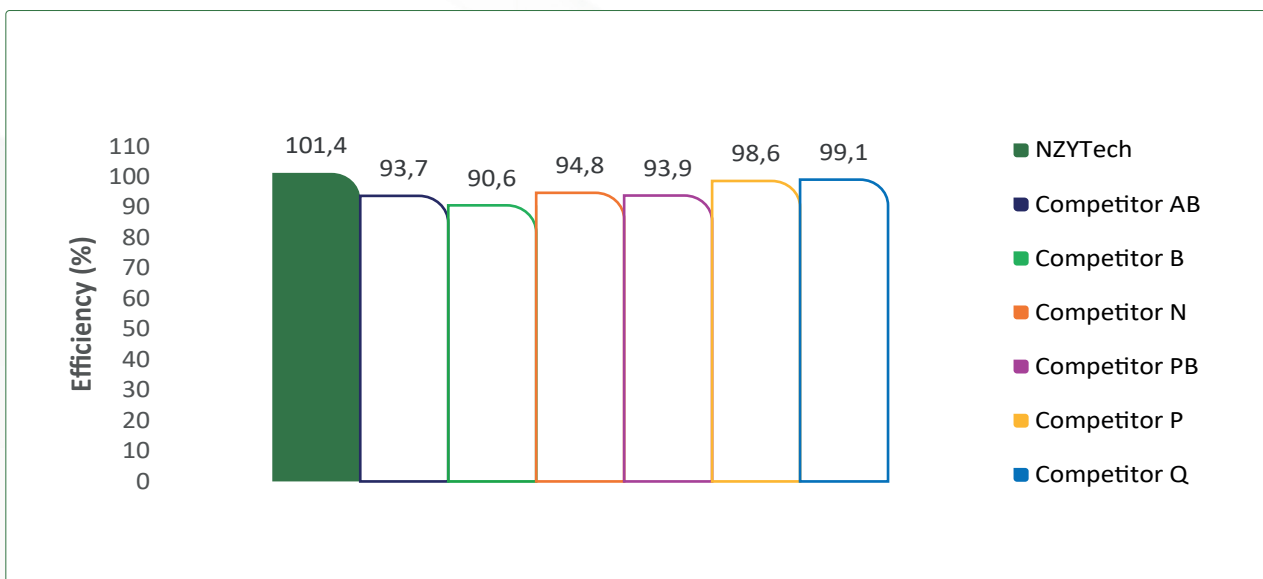
	Starting Template (gDNA)				
	30ng	3ng	0.3ng	30pg	3pg
NZYTech	23,7	26,7	30,0	33,5	36,7
Competitor AB	23,7	27,0	30,8	34,1	37,6
Competitor B	23,0	25,8	29,5	33,0	37,2
Competitor N	23,4	26,7	30,1	33,8	37,1
Competitor PB	23,4	27,0	30,3	34,0	37,3
Competitor P	23,4	26,8	30,2	33,7	36,7
Competitor Q	23,4	26,6	30,0	33,8	36,5



# Comparison of efficiencies

The **versatility** of the NZYSupreme qPCR Probe Master Mix ensures **high efficiency** levels in the detection of the human ACTB housekeeping gene

NZYSupreme qPCR Probe Master Mix is an ultra-sensitive master mix, compatible with common real-time platforms. Benchmarked against a total of 6 competitor master mixes considered to be the gold-standard in qPCR Master Mixes, the NZYSupreme qPCR Probe Master Mix proved to be a formidable product with first-class efficiency. A 10-fold serial dilution of human genomic DNA was used as template for a real-time qPCR experiment to detect the ACTB ( $\beta$ -actin) housekeeping gene





# OEM and Customized Solutions

NZYtech's OEM and Customized solutions offer components and reagents necessary to create specialty solutions for any diagnostic application in research and industry. Thus allowing our clients to leverage NZYtech's robust solutions in their workflow. NZYtech designs bespoke products that help you improve your molecular biology and diagnostics workflows. Ensuring 360° support with technical expertise and logistical proficiency that secures fast turnaround time.



Bespoke Packaging & Branding



Custom Enzymes, Master Mixes or Kits



Dedicated Project Manager

# ISO Certification

**NZYtech maintains rigorous quality standards and procedures, thus ensuring the needs of our customers are met.**

## ISO 13485:2016

NZYtech is ISO 13485 certified for the design, development, manufacture and sales of reagents and IVD kits to detect viral infections by Real-Time PCR. This certification ensures rigorous standards and exemplifies our commitment to effective processes and quality management in the area of qPCR, starting at research and development and ending at its manufacturing and sales.



## ISO 9001:2015

NZYtech supports its customers with high-quality products, services and information. ISO 9001:2015 quality management system assures our global customers that NZYtech is committed to quality and has established reliable and effective internal processes. ISO certification exemplifies our commitment to our customers, to our business, and to all those who rely on and benefit from the use of our products.



# NZYSupreme qPCR Probe Master Mix (x2)



NZYSupreme qPCR Probe Master Mix (2x) is a high-performing, easy-to-use mixture for real-time PCR, specifically for probe-detection technology. It features a dual hot-start polymerase control for maximum sensitivity.

 **Storage Conditions:** -85 °C to -15 °C

**Unit Size:**

2 x 1 mL (200 rxns of 20 µL) · MB41601  
5 x 1 mL (500 rxns of 20 µL) · MB41602  
20 x 1 mL (2000 rxns of 20 µL) · MB41603

Request  
Sample



# NZYSupreme One-step RT-qPCR Probe Master Mix (2x)



NZYSupreme One-step RT-qPCR Probe Master Mix is a highly efficient and optimized reaction mixture that enables convenient and reliable first-strand cDNA synthesis and real-time PCR in one tube.

 **Storage Conditions:** -85 °C to -15 °C

**Unit Size:**

2 x 1 mL (200 rxns of 20 µL) · MB41401  
5 x 1 mL (500 rxns of 20 µL) · MB41402  
20 x 1 mL (2000 rxns of 20 µL) · MB41403

Request  
Sample



## NZYSupreme Multiplex qPCR Probe Master Mix (2x)



An optimized and highly efficient reaction mixture specially developed for real-time PCR using multiple primers and probes.

**Storage Conditions:** -85 °C to -15 °C

### Unit Size:

2 x 1 mL (200 rxns of 20 µL) · MB45201  
5 x 1 mL (500 rxns of 20 µL) · MB45202  
20 x 1 mL (2000 rxns of 20 µL) · MB45203

Request Sample



## Lyo NZYSupreme Multiplex One-Step RT-qPCR Probe Master Mix (2x)



A highly efficient freeze-dried reaction mixture developed for first-strand cDNA synthesis and subsequent multiplex real-time PCR.

**Storage Conditions:** -85 °C to -15 °C

### Unit Size:

for 1.5 mL (150 x 20 µL) · MB44301

Request Sample



## Lyo NZYSupreme Multiplex qPCR Probe Master Mix (2x)



A highly efficient freeze-dried reaction mixture specially developed for real-time PCR using multiple primers & probes.

**Storage Conditions:** -85 °C to -15 °C

### Unit Size:

1.5 mL (150 x 20 µL) · MB45301

Request Sample



## NZYSupreme One-step RT-qPCR Probe Master Mix (2x), ROX



A highly efficient and optimized reaction mixture that enables convenient and reliable first-strand cDNA synthesis and real-time PCR in one tube.

**Storage Conditions:** -85 °C to -15 °C

### Unit Size:

2 x 1 mL (200 rxns of 20 µL) · MB47801  
5 x 1 mL (500 rxns of 20 µL) · MB47802  
20 x 1 mL (2000 rxns of 20 µL) · MB47803

Request Sample



## NZYSupreme One-step RT-qPCR Probe Master Mix (2x), ROX plus



An optimized and efficient reaction mixture for cDNA synthesis and real-time qPCR in a single tube, containing a passive reference dye.

**Storage Conditions:** -85 °C to -15 °C

### Unit Size:

2 x 1 mL (200 rxns of 20 µL) · MB47901  
5 x 1 mL (500 rxns of 20 µL) · MB47902  
20 x 1 mL (2000 rxns of 20 µL) · MB47903

Request Sample



## Lyo NZYSupreme qPCR Probe Master Mix (2x)



A freeze-dried reaction mixture developed for real-time PCR, engineered with a dual hot-start enzyme control mechanism and the latest PCR enhancers.

**Storage Conditions:** -85 °C to -15 °C

### Unit Size:

1 mL (100 rxns of 20 µL) · MB41702

Request Sample



## Lyo NZYSupreme One-step RT-qPCR Probe Master Mix (2x)



A freeze-dried reaction mixture for cDNA synthesis and real-time PCR in a single tube.

**Storage Conditions:** -85 °C to -15 °C

### Unit Size:

for 1.5 mL (150 x 20 µL) · MB41501

Request Sample



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