



## Lyophilized GoldNStart TaqGreen qPCR Master Mix (LGTQMM)

Catalog #MB6018L-5, 250 reactions

### Introduction

ScienCell's Lyophilized GoldNStart TaqGreen qPCR Master Mix (LGTQMM) is a lyophilized SYBR<sup>®</sup> Green dye-based qPCR master mix with a "hot-start" property. The lyophilized format enables high stability under ambient environment and allows for room temperature shipment and storage. The lyophilized version provides the same high performance as ScienCell's GoldNStart TaqGreen qPCR Master Mix (catalog #MB6018). The LGTQMM is ideal for use in real-time quantitative PCR and DNA melt curve analysis. The 2X master mix contains SYBR<sup>®</sup> Green, dNTPs, Taq DNA polymerase, and an inert gold-color loading indicator (ScienCell, catalog #GQ300G) in a single tube. The "hot-start" property achieved through ScienCell's unique chemically modified Taq DNA polymerase provides maximal inhibition of primer dimer formation. The advanced buffer formulation provides superior specificity and efficiency with a wide linear dynamic range. The inert gold-color loading indicator allows for better visualization and tracking of sample loading in qPCR plates or tubes.

### Kit Components

*Catalog #MB6018L-5*

Cat #	# of vials	Item	Quantity
MB6018La-1	5	Lyophilized GoldNStart TaqGreen qPCR Master Mix	1 vial
MB6018Lb-1	5	GNSD Resuspension Buffer	1 mL
MB6018b-1	5	Nuclease-free water	1 mL

### Quality Control

The linear dynamic performance of LGTQMM is verified with serially diluted DNA samples. DNase activity was NOT detected by incubating each component of LGTQMM with single-stranded and double-stranded DNA at 37 °C for 24 hours.

### Product Use

LGTQMM is for research use only. It is not approved for human or animal use, or for application in clinical or *in vitro* diagnostic procedures.

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**Shipping and Storage**

The product is shipped at ambient temperature. Avoid light exposure. All components are stable at room temperature for up to 3 months. For long-term storage, store all components at 4°C. After reconstitution, store all components at 4°C for up to 1 year. For long-term storage of reconstituted master mix, store at -20°C in a manual defrost freezer.

## Procedure

**Important:** Only use nuclease-free reagents in PCR amplification.

**Note:** This master mix does not contain a ROX passive reference dye. If the qPCR instrument being used has a "ROX passive reference dye" option, please deselect this option.

1. To reconstitute the master mix, add 1 mL of GNSD Resuspension Buffer (MB6018Lb-1) to the Lyophilized GoldNStart TaqGreen qPCR Master Mix vial (MB6018La-1). Invert the vial or the bottle a few times to get a homogenous solution.
2. Prepare 20  $\mu$ L qPCR reactions in qPCR tubes or plates as shown in Table 1. For other reaction volume setup, scale up or down proportionally.

**Table 1. Preparation of 20  $\mu$ L qPCR reactions**

Component	Volume	Final concentration
GoldNStart TaqGreen qPCR Master Mix	10 $\mu$ L	1X
Template DNA	variable	-
Nuclease-free water	variable	-
Forward and reverse primers	variable	250 – 500 nM
<b>Total volume per reaction</b>	20 $\mu$ L	-

3. Seal the qPCR reaction wells. Centrifuge the tubes or plates at 1,500X g for 15 seconds. For maximum reliability, replicates are recommended (minimum of 3).
4. Refer to Table 2 for a typical qPCR program setup. Adjust properly according to the optimized qPCR conditions for the reactions to run. Load the PCR tubes or plates into the qPCR instrument and run the program.

**Table 2. A typical qPCR program setup**

Step	Temperature	Time	Cycles
Taq DNA polymerase activation	95°C	10 min	1
Denaturation	95°C	20 sec	30-45
Annealing	50 - 68°C	20 sec	
Extension	72°C	20-45 sec	
Data acquisition	Plate read		
Optional	Melting curve analysis		1
Hold	20°C	Indefinite	1

5. For data analysis, please refer to the data analysis software of the qPCR instrument being used.

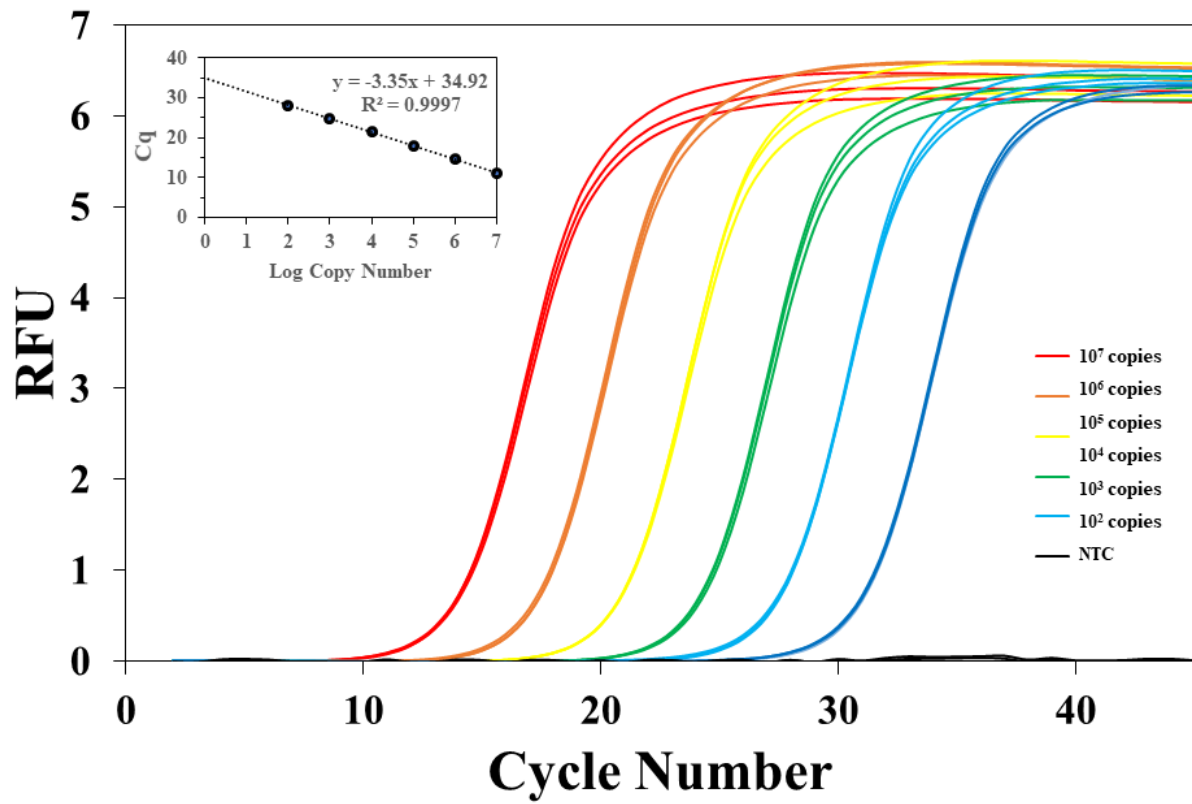


Figure 1. LDHA assay using GoldNStart TaqGreen qPCR Master Mix.