

**TaqMan 2x PCR Master Mix - 100 Reactions**

Product # 28340

**Product Insert****Description:**

Norgen's TaqMan 2x PCR Master Mix is a ready-to-use TaqMan 2x PCR Master Mix solution that contains a PCR internal control which can be detected by HEX/VIC channel in a real-time PCR machine. By detecting the internal control users can validate the DNA template quality, thereby preventing any false negatives in the PCR results. The user needs only to add template, target TaqMan primer/probe mix and water to set up the TaqMan real-time PCR.

**PCR Control:**

TaqMan 2x PCR Master Mix contains PCR control primers/probe (HEX/VIC) and PCR control template. The PCR control reaction in the TaqMan 2x PCR Master Mix is optimized to not interfere with target amplification. The fluorescence of the target probe should not be HEX/VIC.

**Advantages:**

- Convenience and time savings
- Cost efficient
- High sensitivity
- Avoid false negatives due to template quality

**Applications:**

- Routine TaqMan PCR
- Sensitive detection with internal control

**Reagents supplied:**

- TaqMan 2x PCR Master Mix (3 Vials, 100 Reactions)

**Storage Conditions:**

TaqMan 2x PCR Master Mix should be stored at -20°C. For everyday use aliquots can be stored at 4°C for up to 3 months. The TaqMan 2x PCR Master Mix is stable for multiple freeze-thaw cycles. When stored at the proper temperature this reagent is stable for at least 1 year.

**Precautions and Disclaimers:**

This product is designed for research purposes only. It is not intended for human or diagnostic use.

**Tips for Performing PCR Reactions:**

Polymerase Chain Reaction (PCR) is a powerful method used to amplify specific DNA transcripts using multiple cycles containing denaturation and annealing/extension steps. Successful PCR relies on various factors, and it is important to keep a number of points in mind when performing PCR:

1. Using high quality, purified DNA templates greatly enhances the success of PCR.
2. Clean, disposable gloves should be worn at all times when handling reagents, samples, pipettes, disposable tubes, etc. It is recommended that gloves are changed frequently to avoid contamination.
3. There should be designated solutions, tips, tubes, pipettes, etc. for PCR only.
4. Optimize the template amount: up to 1 µg genomic DNA and 10 pg-100 ng for cDNA or Plasmid.

## Procedure

### Reaction Setup Table

TaqMan PCR Reaction Mixture	Single 20 $\mu$ L Rxn	10 Rxn + 1 Rxn **
TaqMan 2x PCR Master Mix	10 $\mu$ L	110 $\mu$ L
Target Primer/Probe Mix*	2 $\mu$ L	22 $\mu$ L
Template DNA	2 - 5 $\mu$ L	2 - 5 $\mu$ L / rxn
Nuclease-Free Water	Up to 20 $\mu$ L	Up to 220 $\mu$ L

\* Suggested concentration of primer (F and R) and probe is 2.5  $\mu$ M. The fluorescence of the target probe should not be HEX/VIC.

\*\* Experienced User Protocol for Reaction Preparation for Multiple Samples

1. Dispense 10  $\mu$ L of TaqMan 2X PCR Master Mix into the PCR tube.
2. Add DNA template (up to 1  $\mu$ g genomic DNA and 100 ng -10 pg for cDNA or Plasmid) and Target Primer/Probe Mix to the PCR tube as shown in the Reaction Setup Table.
3. Add nuclease-free water to bring the total volume to 20  $\mu$ L.
4. Mix the PCR mixture thoroughly and spin down briefly.
5. Place the PCR tubes into the PCR machine and carry out the PCR according to the Suggested TaqMan PCR Program shown in the table below.

### Suggested TaqMan PCR Cycle Conditions

PCR Cycle	Step	Temperature	Duration
Cycle 1	Initial Denaturation	95°C	3 min
Cycle 2 (40X)	Denaturation	95°C	15 sec
	Annealing / Extension	60°C	30 sec

### Technical Support

Contact our Technical Support Team between the hours of 8:30 and 5:30 (Eastern Standard Time) at (905) 227-8848 or Toll Free at 1-866-667-4362. Technical support can also be obtained from our website ([www.norgenbiotech.com](http://www.norgenbiotech.com)) or through email at [techsupport@norgenbiotech.com](mailto:techsupport@norgenbiotech.com).