

2X PCR Master Mix

Norgen's 2X PCR Master Mix is a ready-to-use solution that contains components required for PCR amplification including Taq DNA polymerase, dNTPs, reaction buffer, MgCl₂, KCl and a PCR enhancer/stabilizer. The user needs only to add template, the primer set and water to the master mix in order to set up the PCR reaction. This convenient 2X PCR Master Mix reduces the time required to set up PCR reactions and reduces the possibility of contamination particularly when preparing large numbers of reactions. The optimized master mix allows for robust amplification of DNA templates with high yields of PCR products.



Taq DNA Polymerase is a highly thermostable DNA polymerase that possesses a 5' → 3' polymerase activity and a very low 5' → 3' exonuclease activity. The source of Taq included with Norgen's 2X PCR Master Mix is an *E. coli* strain with a cloned *Taq* DNA Polymerase gene from *Thermus aquaticus* YT-1.

Norgen's 2X PCR Master Mix Benefits:

Convenient	With the ready-to-use Master Mix, the user needs only to add template, the primer set and water to the master mix in order to set up the PCR reaction.
Time Savings	Set up PCR reactions in a shorter time, as less pipetting steps are required.
Cost Efficient	No need to buy separate enzymes, dNTPs and buffers. All are included with the ready-to-use Master Mix.
High Sensitivity and Yield	The optimized Master Mix allows for highly sensitive amplifications with high yields of PCR products.
Robust Amplification	Norgen's 2X PCR Master Mix is capable of amplifying difficult templates with a high degree of reproducibility.
Can be used for Various Applications	Norgen's 2X PCR Master Mix can be used for a number of applications including: <ul style="list-style-type: none">• Routine PCR amplification of DNA templates• PCR for post reverse transcription step• Multiple band detection or genotyping

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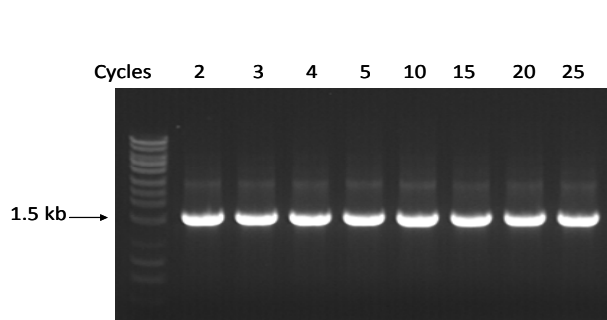


Figure 1. Highly Stable after Multiple Freeze-Thaw Cycles

The stability of Norgen's 2X Master Mix was tested by subjected the mix to multiple freezing and thawing cycles, followed by using the Master Mix to amplify the 16s rDNA (1.5 kb) of *Staphylococcus aureus* gDNA. Norgen's 2X Master Mix showed robustness and outstanding stability from multiple freezing and thawing steps at -20°C. M: FastRunner DNA Ladder (Cat# 12800). Ten µL of each PCR reaction was loaded on a 1% TAE agarose gel.

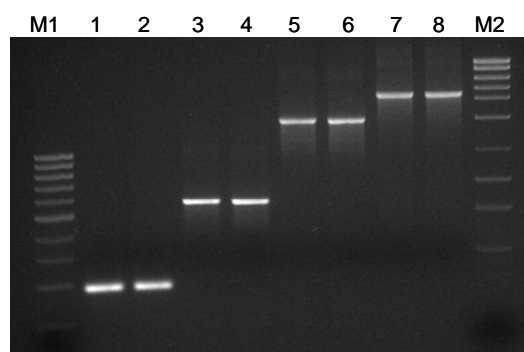


Figure 2. Successful Amplification of Different Sized Amplicons. Norgen's 2X PCR Master Mix was used in a series of PCR reactions to amplify a number of different sized amplicons from the adenovirus E2 region. Lanes 1 and 2 correspond to a 189 bp product, Lanes 3 and 4 correspond to a 565 bp product, Lanes 5 and 6 correspond to a 1501 bp product, and Lanes 7 and 8 correspond to a 2202 bp product. Norgen's 2X PCR Master Mix was able to amplify all the different sized products with a high sensitivity and yield. Lane M1 is Norgen's PCR Sizer 100 bp DNA Ladder and Lane M2 is Norgen's MidRanger 1kb DNA Ladder.

Customer Supplied Reagents and Equipment

- Thermocycler
- Template DNA
- Forward and reverse primers
- Pipettes and tips
- PCR tubes
- Nuclease-free water

Storage Conditions and Product Stability

Norgen's 2X Master Mix should be stored at -20°C. For everyday use an aliquot can be stored at 4°C for up to three months. The Master Mix is stable for multiple freeze-thaw cycles (see Figure 1). When stored at the proper temperature this reagent is stable for at least 1 year.

Cat #	Description	Quantity
28008	2X PCR Master Mix (200 reactions)	200 reactions (20 µL vol)
28009	2X PCR Master Mix (500 reactions)	500 reactions (20 µL vol)