



Beh-taq PCR Master Mix (2X) - 100 Reactions

Product Insert

Description:

Beh-taq PCR Master Mix (2X) is a ready-to-use Beh-taq PCR Master Mix (2X) 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 Beh-taq real-time PCR.

PCR Control:

Beh-taq PCR Master Mix (2X) 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:

- Beh-taq PCR Master Mix (2X) (3 Vials, 100 Reactions)

Storage Conditions:

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

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 μ L Rxn | 10 Rxn + 1 Rxn ** |
|-----------------------------|-----------------------|---------------------|
| Beh-taq PCR Master Mix (2X) | 10 μ L | 110 μ L |
| Target Primer/Probe Mix* | 2 μ L | 22 μ L |
| Template DNA | 2 - 5 μ L | 2 - 5 μ L / rxn |
| Nuclease-Free Water | Up to 20 μ L | Up to 220 μ L |

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

** Experienced User Protocol for Reaction Preparation for Multiple Samples

1. Dispense 10 μ L of Beh-taq PCR Master Mix (2X) into the PCR tube.
2. Add DNA template (up to 1 μ 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 μ 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 Beh-taq 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 |