**Print Page 2 Only for Customer**

**Concentration:** FlashTaq HotStart 2X MeanGreen MasterMix: 2X

**Storage and Handling:**

Upon arrival store at -20°C for provided expiration date, Room Temperature for 60 Days, 4°C for up to 120 days. Minimize Freeze thaw of master mix to avoid loss of performance.

**Ordering Information:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Item Number** | **Number of Tubes and Volume** | **Total number of reactions which can be obtained when using the following reaction sizes** | | |
| **50μL Reaction** | **20μL Reaction** | **10μL Reaction** |
| FT-MMWD-250 | FlashTaq HotStart 2X MeanGreen MasterMix: 5x1.25mL | 250 | 625 | 1250 |
| FT-MMWD-500 | FlashTaq HotStart 2X MeanGreen MasterMix: 10x1.25mL | 500 | 1250 | 2500 |
| FT-MMWD-1000 | FlashTaq HotStart 2X MeanGreen MasterMix: 20x1.25mL | 1000 | 2500 | 5000 |
| FT-MMWD-2500 | FlashTaq HotStart 2X MeanGreen MasterMix: 50x1.25mL | 2500 | 6250 | 12500 |

**Product Description:** Empirical’s FlashTaq HotStart 2X MeanGreen MasterMix contains FlashTaq HotStart DNA Polymerase; a chemically modified HotStart Taq DNA polymerase. The FlashTaq HotStart 2X MeanGreen MasterMix remains inactive at room temperature until after 2 minutes activation at 95°C. The 2X MeanGreen MasterMix contains dCTP, dGTP, dATP, dTTP, MgCl2, FlashTaq HotStart, and MeanGreen Dye. Taq DNA Polymerase gene is isolated from *Thermus aquaticus* YT1 and expressed in *E. coli*. Just add template and primers with the MasterMix and the reaction is ready to go*.* FlashTaq HotStart 2X MeanGreen MasterMix contains blue and yellow loading dyes and a density agent that allow reactions to be loaded directly onto agarose gels and make monitoring progress during electrophoresis easy. These dyes do not obscure visualization of DNA bands on the gel as the dye fronts run outside the size of most PCR products.

**Protocol:** Minimize Freeze thaw of master mix to avoid loss of performance. The following reaction set up and general cycling conditions are recommended but can vary depending on the template and primers being used.

**Reaction set-up for a 50uL Reaction:**

|  |  |  |
| --- | --- | --- |
| Component | Volume | Final Concentration |
| FlashTaq HotStart 2X MeanGreen MasterMix | 25 µl | 1X |
| Upstream Primer, 10µM | 0.5-5.0 µl | 0.1-1.0µM |
| Downstream Primer, 10µM | 0.5-5.0 µl | 0.1-1.0µM |
| DNA Template | X µl | > 1ng |
| Nuclease Free Water to volume | 50 µl | N.A. |

**Thermal Cycling Conditions:** The following general cycling conditions are recommended but can vary depending on the template and primers being used.

|  |  |  |  |
| --- | --- | --- | --- |
| Cycling Step | Temperature | Holding Time | Cycles |
| Initial Denaturation and FlashTaq HotStart Activation | 95°C | 2min | 1 |
| Denaturation | 94-96°C | 15 - 30sec | 20-30 |
| Annealing# | 55-65°C | 15 - 60sec |
| Extension | 70-72°C | 1min/kb |
| Final Extension | 70-72°C | 0-10min | 1 |
| #Annealing will depend on primer length and composition. Generally, begin 5°C below primer Tm. | | | |