

User Instruction

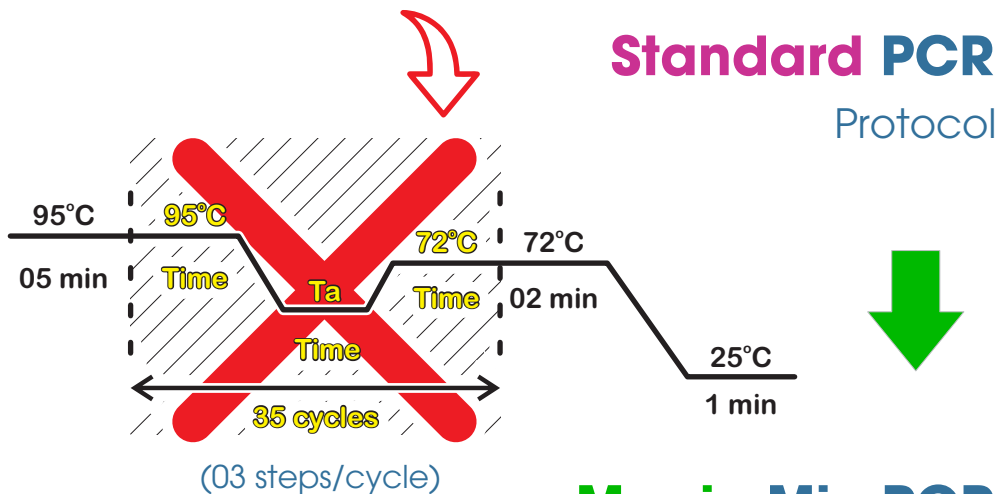
MAGIC MIX SyBr Green 2X (MGM.SBG 2X)

IMPORTANT: Please read carefully the user instruction before using the MGM.SBG 2X

1. OVERVIEW

PHUSA Genomics MAGIC Mix MGM.SBG 2X is a HOT-START enabled PCR Mix with the following specifications:

- It contains SyBr-Green I suitable for qPCR;
- It works with 02 temperatures: 95°C for Denaturation, **Tanex (Annealing & Extension)** 60°C for any primers with T_m from 50°C to 70°C;
- **The MGM.SBG 2X can amplify up to 700 bp, with optimal range from 100 to 500 bp.**
- **The 72°C extension is no longer required.**



2. HANDLING & STORAGE:

- For shipping: It can be kept at room temperature (30°C - 37°C) for 07 days;
- For short/ medium/ long term storage (+1 year): -20°C - 0°C;
- For lab handling: Room temperature.

3. PCR MIX PREPARATION

Vortex the MGM.SBG 2X tube, then centrifuge gently to pull the entire solution to the bottom of the tube. Following are the recommended range of PCR reaction volumes that will allow good PCR results.

3.1 PCR reaction volume (27 - 30 uL)

Prepare the reaction mixture using the following table:

Composition	Concentration	Volume used for 1 rxn (uL)
MGM.SBG 2X	2X	15
DEPC Water		10
Primer Foward	10 pmol/uL	1
Primer Reverse	10 pmol/uL	1
Template		2 - 3
Total volume		29 - 30

3.2 PCR reaction volume (20 uL)

Prepare the reaction mixture using the following table:

Composition	Concentration	Volume used for 1 rxn (uL)
MGM.SBG 2X	2X	10
DEPC Water		5.5
Primer Foward	10 pmol/uL	0.75
Primer Reverse	10 pmol/uL	0.75
Template		2 - 3
Total volume		19 - 20

3.3 PCR reaction volume (15 uL)

Prepare the reaction mixture using the following table:

Composition	Concentration	Volume used for 1 rxn (uL)
MGM.SBG 2X	2X	7.5
DEPC Water		3.5
Primer Foward	10 pmol/uL	0.5
Primer Reverse	10 pmol/uL	0.5
Template		2 - 3
Total volume		14 - 15

Once the PCR mix is done,

- Vortex the PCR mix, distribute into each PCR tube;
- Add 2 - 3 uL of extracted DNA to the PCR tube.
- Centrifuge gently to pull the entire solution to the bottom of the PCR tube.

4. PCR REACTION SET-UP

Tanex is the working temperature of our MGM.SBG 2X, it can perform **annealing and extension** at 60°C.

For target up to 700 bp

IN MULTI TARGET MODE, our MGM.SBG 2X will help you to perform many PCR mix in the same run regardless of the T_m of the primers (it can vary from 50°C to 70°C).

- In **Single or Multi target** mode, if the primers T_m are ranging from 50°C - 70°C, use **Tanex = 60°C** for best results;
- MGM.SBG 2X allows the use of primers with 25°C differences between them.

Use the following Universal protocol for all your primers with T_m ranging from 50°C to 70°C:

Stage	Temperature	Time	Cycles
Denaturation	95°C	05 min	1
Denaturation	95°C	10 sec	30 - 35
Tanex (Annealing/ Extension)*	60°C	30 sec**	
Extension	72°C	02 min	1
Keeping	25°C	30 sec	

* The 72°C extension is no longer required;

** Tanex has been optimized for **30 seconds**, regardless of target length from **100 - 700 bp**.

- THE END -



Magic Mix PCR
Technical Guide Book