

2×AMPQX® Gold PCR Master Mix

Cat. no. LM201002-1

Address: SHT technology GmbH, Niederhöchstädter Str. 64, 61476 Kronberg im Taunus, Germany

Tel.: +49 176 34989414

Website: <https://sht-medino.de/>

2×AMPQX® Gold PCR Master Mix

Cat. no. LM201002-1

Product Information

Product	2 × AMPQX® Gold PCR Master Mix
Catalog No.	LM201002-1
Storage conditions	This product should be stored at -20 °C for 2 years.

2. Product description

2 × AMPQX® Gold PCR Master Mix is a ready-to-use 2 × premix solution, containing AMPQX® Gold High-Fidelity DNA Polymerase, dNTPs, and an optimized buffer system. The premix includes a heat-activated factor for AMPQX® Gold High-Fidelity DNA Polymerase, greatly enhancing the detection rate and specificity of the amplification. An extension factor added to the mix enables the enzyme to amplify long fragments, with target fragment lengths of up to 10 kb. This enzyme exhibits 5' → 3' DNA polymerase activity and 3' → 5' exonuclease activity, offering fidelity 52 times greater than that of Taq DNA Polymerase and six times that of regular Pfu DNA Polymerase. The amplification speed can reach 15 sec/kb. It is suitable for the amplification of complex templates and produces blunt-ended products.

2 × AMPQX® Gold PCR Master Mix has the advantages of being fast, simple, highly sensitive, highly specific, and stable. The reaction system only needs the addition of primers and template, and can be amplified using a two-step procedure, simplifying experimental steps and saving time. This product does not contain dye; thus, PCR products must be added to Loading buffer before electrophoresis. Additionally, this product contains a special protective agent, allowing the premix to maintain stable activity after repeated freeze-thaw cycles.

3. Components

Cat.No.	LM201002
Size	1 mL/5×1 mL

4. Instructions

4.1. Recommended PCR reaction systems.

Components	Volume (μL)	Final concentration
ddH ₂ O	Up to 50	-

Template	x	-
Forward Primer 10 µmol/L	2.5	0.5 µmol/L
Reverse Primer 10 µmol/L	2.5	0.5 µmol/L
2 ×AMPQX® Gold PCR Master Mix	25	1×

[Note]:

- a) Polymerase final concentration: 1× containing 1 U / 50 µL polymerase
- b) Primer: The final concentration of primer in the PCR reaction system is 0.2 - 1 µM, recommended as 0.5 µM.
- c) Mg2 +, dNTP, final concentration: 1.5 mM Mg2 + and 200 µM.
- d) Recommended usage for different templates (50 µL reaction system):

Template	The amplified fragment was 1 kb - 10 kb
Genome DNA	50 ng-200 ng
Plasmid or viral DNA	10 pg-20 ng
cDNA	1-5 µL (not more than 1 / 10 of total volume of PCR reaction)

4.2.Reaction program

Cycle step	Temp.	Time	Cycles
Initial denaturation	98°C	3min	1
Denaturation	98°C	10 sec	30-35
Annealing	60°C	20 sec	
Extension	72°C	30 sec/kb	
Final extension	72°C	5 min	1

[Note]:

- a) Pre-denaturation temperature and time: recommended temperature: 98°C , time: 3 min, high GC content template 5-10 min.
- b) Annealing temperature and time: recommended temperature: 60°C , or according to the need, set up a temperature gradient to explore the optimal temperature of primer annealing. The recommended annealing time is set to 20 sec, which can be adjusted within 10-30 sec. Too long an annealing time may cause the dispersion of the amplification product on the glue .
- c) Extended temperature and time: Recommended temperature: 72°C . Time: 30 sec/kb, and the complex template can be extended to 60 sec/kb according to the actual situation.
- d) Amplification product: Please place the PCR amplified product in -20°C to prevent the enzyme from degrading the amplified product. The amplified products are shown at the flat ends.

5. Notes

- a) For your safety and health, please wear a lab coat and disposable gloves during operation.
- b) This product is for research use only!
- c) After thawing, Master Mix may precipitate. Before use, vortex and mix until the precipitate disappears, without affecting the performance of the reagent.