

Flash PCR Master Mix For Long Fragment

Rapid high-fidelity amplification
premix for long DNA fragments



■ Introduction

- Pre-mixed solution, ready for PCR experiments with only the addition of primers and template.
- Has both 5'→3' DNA polymerase activity and 3'→5' exonuclease activity, with fidelity approximately 80 times higher than Taq DNA polymerase. The amplified products have blunt ends.
- Polymerase activity is effectively blocked at 55 °C and below (blocking rate >95%) and rapidly restored after incubation at 98 °C for 30 seconds.
- Suitable for amplifying target fragments from 100 bp to 40 kb.
- Adaptable for downstream applications such as molecular cloning, Sanger sequencing, next-generation sequencing (NGS), and Nanopore sequencing.

■ Features



Long-fragment Compatible

Compatible with
long-fragment
templates.



Time-Saving

The extension
time can be
1 sec/kb at
maximum.



High GC Compatible

Compatible with
high GC content
templates.



High Resilience

Compatible with direct
amplification of blood
and crude lysate samples
(e.g., mouse tail
crude extract).

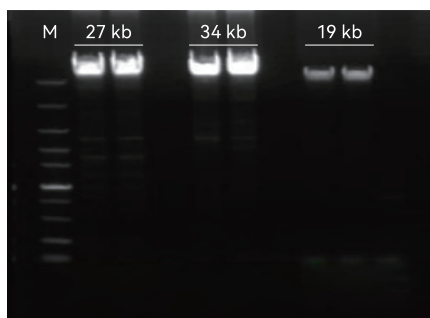
Amplification Tips

Target Fragment Length	Recommended Extension Time
<2 kb	1-2 sec/kb
2-5 kb	2-5 sec/kb
5-10 kb	5-10 sec/kb
>10 kb	10-20 sec/kb

■ Experiment

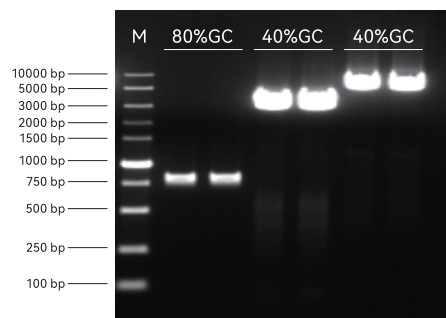
Long-fragment Compatible

Experiment Design 1: Using human genomic DNA as a template, Flash PCR Master Mix For Long Fragment was used to amplify long target fragments of 19 kb, 27 kb, and 34 kb. The results show that Flash PCR Master Mix For Long Fragment can effectively amplify target fragments up to 34 kb.



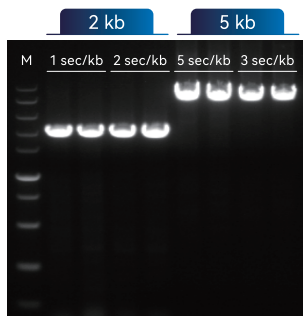
High GC Compatible

Experiment Design 2: Human genomic DNA was used as a template to amplify target fragments with GC content of 40% and 80% using 2 Flash PCR Master Mix For Long Fragment. The results show that Flash PCR Master Mix For Long Fragment can effectively amplify target fragments with GC content as high as 80%.



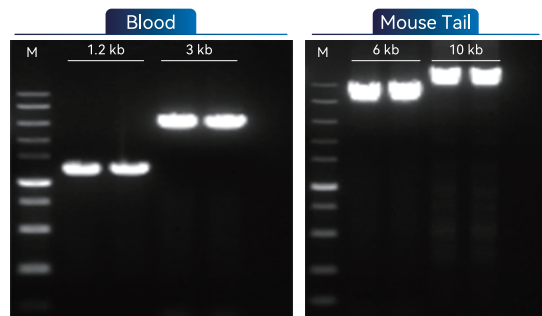
High Amplification Efficiency

Experiment Design 3: Human genomic DNA was used as a template to amplify target fragments of 2 kb and 5 kb using Flash PCR Master Mix For Long Fragment (with extension times set to 1 sec/kb, 2 sec/kb, 3 sec/kb, and 5 sec/kb). The results show that the extension time for Flash PCR Master Mix For Long Fragment can be as short as 1 sec/kb (for target fragments within 2 kb).



High Resilience

Experiment Design 4: Blood and mouse tail lysate were used as templates to amplify target fragments of different lengths using Flash PCR Master Mix For Long Fragment. The results show that Flash PCR Master Mix For Long Fragment can amplify blood and mouse tail crude extract samples effectively .



■ Order Information

Cat. No.	Product Name	Specification
CW3397M	Flash PCR Master Mix For Long Fragment	5 mL