

KOD One™ PCR Master Mix

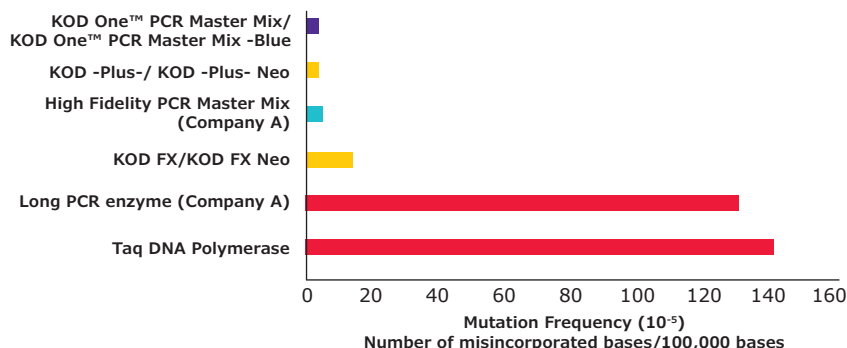
Ultra-fast, high fidelity PCR with the flexibility you need

Ultra-fast PCR allows you to obtain your results in a shorter timeframe than traditional PCR, making it an efficient option. The new KOD One™ PCR Master Mix offers ultra-fast PCR with one of the fastest elongation rates available for high fidelity polymerases.

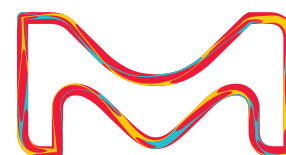
KOD One™ Polymerase

The KOD One™ PCR Master Mix uses a new genetically modified hot start KOD polymerase (UKOD) to enable ultra-fast PCR while offering the highest specificity, fidelity, and yield. The KOD One™ polymerase is made of a new DNA polymerase with a significantly faster elongation time of 5 seconds per kb (5 sec/kb) by applying both the UKOD and an elongation enhancer that is unique to this product.

The hot start KOD One™ polymerase is antibody-inactivated with two types of antibodies that prevent the 5' → 3' polymerase activity and 3'→5' exonuclease activities. Upon heat-activation, the 3'→5' proof-reading ability of the enzyme generates blunt-end PCR products.



The KOD One™ polymerase shows approximately 80-fold higher fidelity than Taq DNA polymerase.



Benefits

The KOD One™ PCR Master Mix formulation offers the following advanced features:

- Ready-to-Use
- High Fidelity
- High Efficiency
- Crude Sample PCR
- High Specificity
- Primers with dI and dU

Applications

A key application of KOD One™ PCR Master Mix is oncology research. This includes a variety of specific applications such as:

- DNA/cDNA amplification
- Direct PCR
- Colony PCR
- NGS library amplification
- PCR amplification to detect site-directed mutagenesis

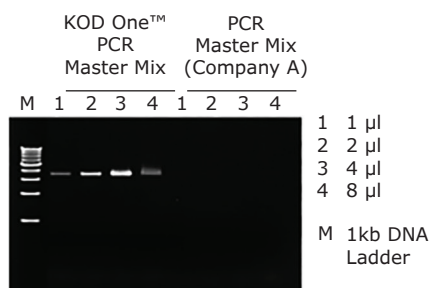
Reaction Mix		PCR Conditions	
KOD One™ PCR Master Mix	10 µL	98 °C, 0:10	← ×30
10 µM Fwd	0.6 µL	60 °C, 0:05	
10 µM Rev	0.6 µL	68 °C, 0:01	
4 ng/µL Human genome	1 µL		
H ₂ O	Up to 20 µL		

KOD One™ PCR Master Mix enables high throughput PCR and ultra-fast PCR cycling conditions with an extension time of as quick as 5 sec/kb for high efficiency.

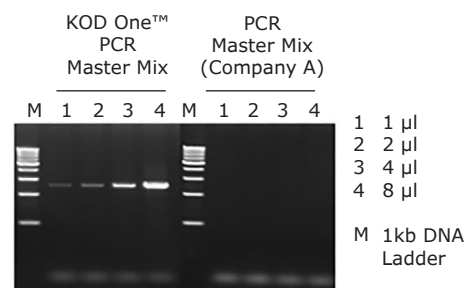
Flexibility

The KOD One™ PCR Master Mix is a flexible product, provided in a convenient, ready-to-use format, with the ability to use it directly on crude samples like blood and mouse cell lysates. In addition to crude samples, it can be used on templates containing uracils (dU). The master mix can use primers containing both inosines (dI) and dU for amplification. Features like a hot-start format for specific enzyme activity, as well as higher fidelity than most polymerases, add to the flexibility of this master mix to be used in different applications.

Amplification from whole blood



Amplification from mouse lysate



KOD One™ PCR Master Mix is effective for direct PCR amplification of crude samples such as biological samples, food samples, soil extract, etc.

Product Description	Cat. No.
KOD One™ PCR Master Mix	KMM-101
KOD One™ PCR Master Mix -Blue-	KMM-201

Discover more at

[SigmaAldrich.com/kod-one](https://www.sigmaaldrich.com/kod-one)

To place an order or receive technical assistance

Order/Customer Service: [SigmaAldrich.com/order](https://www.sigmaaldrich.com/order)

Technical Service: [SigmaAldrich.com/techservice](https://www.sigmaaldrich.com/techservice)

Safety-related Information: [SigmaAldrich.com/safetycenter](https://www.sigmaaldrich.com/safetycenter)

Merck KGaA
Frankfurter Strasse 250
64293 Darmstadt, Germany

[SigmaAldrich.com](https://www.sigmaaldrich.com)

© 2021 Merck KGaA, Darmstadt, Germany and/or its affiliates. All Rights Reserved. Merck, the vibrant M, and Sigma-Aldrich are trademarks of Merck KGaA, Darmstadt, Germany or its affiliates. All other trademarks are the property of their respective owners. Detailed information on trademarks is available via publicly accessible resources.

MK_FL6108EN Ver. 2.0 32767 06/2021

