

ZymoTaq™ qPCR PreMix

Cat. Nos. E2054 (50 Reactions)

E2055 (200 Reactions)



ZYMO RESEARCH

The Beauty of Science is to Make Things Simple

Storage: -20 °C

Product Information

Features:

- Add water, DNA and primers and go!
- Robust amplification of *bisulfite-treated* DNA for methylation detection
- Strong fluorescent signal for real-time and quantitative PCR assays
- Ideal for other HRM applications such as SNP analysis and genotyping

Description:

The **ZymoTaq™ qPCR PreMix** product contains all the reagents needed to perform quantitative PCR and other molecular downstream analysis such as high-resolution melt (HRM) analysis of DNA methylation and other general real-time PCR assays. It features a hot-start DNA polymerase and buffer system optimized for the amplification of *bisulfite-treated* DNA. It also includes an intense dsDNA-specific fluorescent dye, SYTO 9®, for sensitive real-time DNA quantification. This technology can also be found in the Femto Quantification Kits (Cat. No. E2005, E2006, E2007) for low copy detection of DNA from human, bacteria, or fungi.

Product Contents:

	E2054 (50 Rxns.)	E2055 (200 Rxns.)	Storage Temp.
2X ZymoTaq™ qPCR PreMix	2 x 625 µl	8 x 625 µl	-20 °C
DNase/RNase-Free Water	2 x 1 ml	5 x 1 ml	Room Temp.

Storage:

Store at -20°C for up to 12 months. Minimize exposure to light. Avoid repeated freeze/thawing of reagents.

Enzyme Concentration:

Reaction conditions at 1X (50 µl total volume) will contain 2 U of ZymoTaq™ DNA polymerase.

Unit Definition:

One unit (U) enzyme of ZymoTaq™ DNA Polymerase is defined as the amount of enzyme required for the incorporation of 10 nM dNTPs into an acid-insoluble form in 30 minutes at 72°C.

Instrumentation:

Real-time PCR can be performed on any instrument that has optical scanners that do not require passive reference dye.

Suggested Reaction Setup (50 µl):

Reagent	Volume	Final conc.
2X ZymoTaq™ qPCR PreMix	25 µl	1 X
Forward Primer (10 µM)	Variable	0.3 to 1 µM
Reverse Primer (10 µM)	Variable	0.3 to 1 µM
Template DNA	Variable	< 100 ng/20 µl
ddH ₂ O	to 50 µl	–
Total volume	50µl	

Note: The final concentration of MgCl₂ in the reaction (above) is 2.75 mM. If required, scale reaction reagent volumes accordingly to optimize the MgCl₂, primer, and/or template concentrations.

Suggested Conditions for qPCR:

Set the real-time PCR instrument to excitation and emission wavelengths of **465 nm** and **510 nm**, respectively.

Note: A setting that is compatible with SYBRgreen® should be compatible with the SYTO 9® dye in this kit.

Initial denaturation	95 °C	10 min.
Denaturation	94 to 96 °C	30 sec.
Annealing	Variable	30-40 sec.
Extension	72 °C	30-60 sec. for ≤ 1kb*
	30-40 Cycles	
Final extension	72 °C	7 min.
Hold	4 °C	> 4 min.

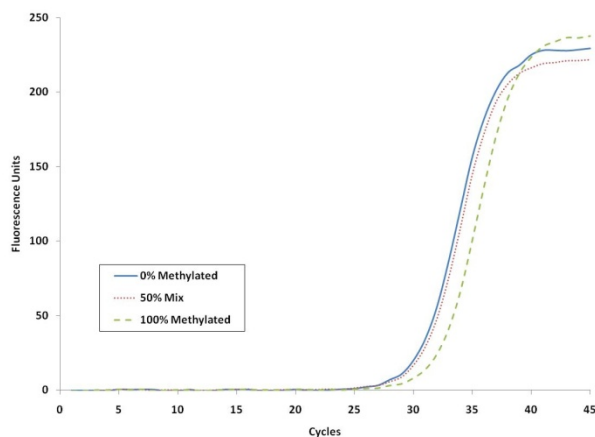
***Note:** Add 15 to 30 seconds to the extension time for each additional kb over 1 kb. Make adjustments to the temperature if necessary.

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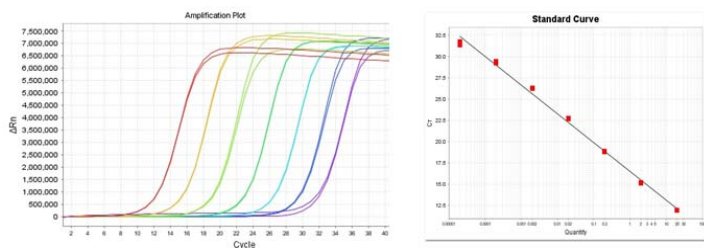
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ZymoTaq™ qPCR PreMix Analysis:



Real-Time Amplification Plot. This figure shows robust real-time amplification of 10 ng of bisulfite-converted human DNA using the ZymoTaq™ qPCR PreMix and primers designed to amplify a region of the *MGMT* promoter.



Reliable Standards for the Quantification of Human DNA: Human DNA Standards performed in duplicates 10-fold serial dilutions ranging from 20 ng to 20 fg.

Related Products:

Product Name	Size	Catalog No.
ZymoTaq™ DNA Polymerase	50 Rxns.	E2001
	200 Rxns.	E2002
ZymoTaq™ PreMix	50 Rxns.	E2003
	200 Rxns.	E2004

Also Available:

Product Name	Size	Catalog number
EZ DNA Methylation™ Kit	50	D5001
	200	D5002
	2 x 96	D5003
	2 x 96	D5004
EZ DNA Methylation-Gold™ Kit	50	D5005
	200	D5006
	2 x 96	D5007
	2 x 96	D5008
EZ DNA Methylation-Direct™ Kit	50	D5020
	200	D5021
	2 x 96	D5022
	2 x 96	D5023
EZ DNA Methylation-Lightning™ Kit	50	D5030
	200	D5031
	2 x 96	D5032
	2 x 96	D5033
EZ DNA Methylation-Startup™ Kit	1 kit	D5024
Femto™ Human Quantification Kit	1 kit	E2005
Femto™ Bacterial Quantification Kit	1 kit	E2006
Femto™ Fungal Quantification Kit	1 kit	E2007
Universal Methylated DNA Standard	1 set	D5010
Universal Methylated Human DNA Standard	1 set	D5011
Universal Methylated Mouse DNA Standard	1 set	D5012
Human Methylated and Non-methylated DNA Set	1 set	D5014
Human HCT116 DKO Non-methylated DNA	5 µg	D5014-1
Human HCT116 DKO Methylated DNA	5 µg	D5014-2
Bisulfite Converted Universal Methylated Human DNA Standard	1 set	D5015
<i>E. coli</i> Non-methylated Genomic DNA	5 µg	D5016
Methylated-DNA IP Kit	10	D5101
QuestTaq™ qPCR Premix	50 rxns	E2052
	200 rxns	E2053
Anti-5-Methylcytosine Monoclonal Antibody (clone 10G4)	50 µg	A3001-50
	200 µg	A3001-200
CpG Methylase (M.SssI)	200 units	E2010
	400 units	E2011

Trademarks and Disclaimers:

Note: ™ Trademarks of Zymo Research Corporation. This product is for research use only and should only be used by trained professionals. It is not intended for use in diagnostic procedures. Some reagents included with this kit are irritants. Wear protective gloves and eye protection. Follow the safety guidelines and rules enacted by your research institution or facility. The Polymerase Chain Reaction (PCR) process is covered by U.S. Patent: #4,683,195; 4,683,202 assigned to Hoffmann-La Roche. Patents pending in other countries. No license under these patents to use the PCR process is conveyed expressly or by implication to the purchaser by the purchase of Zymo Research's products. Further information on purchasing licenses to practice the PCR process can be obtained from the director of Licensing at Applied Biosystems, 850 Lincoln Centre Drive, Foster City, California 94404 or at Roche Molecular Systems, Inc., 1145 Atlantic Avenue, Alameda, California 94501.

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