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🌐 Taq PCR (Protocol for ZymoTaq™ PreMix)

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Protocol status: Working
 We use this protocol and it's working

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GUIDELINES

ZymoTaq™ PreMix is supplied as a 2X concentrated “master mix” containing all the reagents needed to perform “hot start” PCR. The inclusion of a heat-activated, thermal-stable DNA polymerase reduces primer dimer and non-specific product formation that can occur when performing conventional PCR. This unique product is specifically designed for the amplification of bisulfite-treated DNA for methylation detection, realtime and quantitative PCR that are SYBR Green and probe based. The ZymoTaq™ PreMix yields specific amplicon formation with little or no byproducts. Simple and easy to use, just add water, primers, and template DNA to the ZymoTaq™ PreMix and then heat at 95°C for 10 minutes to initiate polymerization.

ZymoTaq™ DNA polymerase is a heat-activated, “hot start” polymerase that has 3'-terminal transferase activity. The addition of “A” overhangs to amplified DNA makes it ideal for use in TA-cloning.

Store ZymoTaq™ PreMix at -20°C for up to 12 months. Avoid repeated freeze/thawing of reagents. Prolonged storage is at -80°C

MATERIALS

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✂ ZymoTaq™ PreMix - 50 rxns **Zymo Research Catalog #E2003**

✂ ZymoTaq™ PreMix - 200 rxns **Zymo Research Catalog #E2004**

	Reag ent	Volu me	Final conce ntrati on
	Zymo Taq™ PreMi x	25 µL	1X
	Forw ard Prime r (10 µM)	Varia ble	0.3 to 1 µM
	Rever se Prime r (10 µM)	Varia ble	0.3 to 1 µM
	Temp late	Varia ble	< 200 ng/50 µL
	ddH ₂ O	to 50 µL	
	Total volum e	50 µL	

- 1 Add all components in a 250 µL tube making up to a 25 or 50 µL reaction. If performing various PCR with different templates, a Master Mix is recommended to be done.

	Reag ent	Volu me	Final Conc entrat ion
	Zymo Taq™ PreMi x	25 µL	1X
	Forwa rd Prime r (10 µM)	Varia ble	0.3 to 1 µM
	Rever se Prime r (10 µM)	Varia ble	0.3 to 1 µM

Temp late	Varia ble	< 200 ng/50 µl
ddH ₂ O	to 50 µL	
Total Volu me	50 µL	

- 2 Gently mix the PCR reactions and transfer the tubes to a thermocycler. Thermocycling conditions for a routine PCR:

Step	Temp eratur e	Time	Cycle s
Initial Denat uratio n		10 minut es	1
Denat uratio n	94- 96°C	30 sec	30-40
Anne aling	Varia ble	30-40 sec	
Exten sion	72°C	30 sec - 1 minut e*	
Final Exten sion	72°C	7 minut es	1
Hold	4°C	> 4 minut es	1

* For ≤ 1kb. Add an additional 15-30 seconds to the extension time for each kb > 1 kb. Make adjustments to the temperature and/or time if necessary.