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Version 8

Medix Biochemica

Product Manual
Cat. No: #4000

PlexTaq® 5x qPCR Multiplex Master Mix

Description

PlexTaq® 5x qPCR Multiplex Master Mix contains all components necessary for rapid, sensitive, and reproducible amplification and quantification of DNA and cDNA. An engineered DNA polymerase and an optimized buffer including ultrapure dNTPs are key components of this ready to use mix. An aptamer-based hot-start formulation prevents false amplification during the reaction set-up.

PlexTaq® 5x qPCR Multiplex Master Mix is compatible with probe-based qPCR in all standard real-time PCR thermocyclers not requiring a passive reference dye. Only primers, template and a fluorescence-based hydrolysis / hybridization probe need to be added. This mix provides robust PCR performance for a wide range of qPCR applications. The buffer is optimized to function with a wide range of templates including human, mammal, and bacterial derived samples. PlexTaq® 5x qPCR Multiplex Master Mix ensures reproducible uniform results, significantly reduces set-up times, and the risk of pipetting errors.

Upon addition of target specific primers and probes to PlexTaq® 5x qPCR Multiplex Master Mix, the mixture can be directly lyophilized, without the need to add additional excipients as these are included in the mix. Contact us for lyophilization protocol recommendations.

Kit components

Component	S pack*	M pack*
PlexTaq® 5x qPCR Multiplex Master Mix	1 x 400 µL	2 x 1 mL

*Other pack sizes, bulk orders and customization are available upon request.

Storage and shipment

Transport with cool packs. The reagents should be stored at -20°C upon arrival. The reagents are stable until the expiration date if stored correctly.

Reaction mastermix set-up

The recommended reaction mastermix setup for a 20 µL reaction volume is shown in the table below. Mix and spin down all solutions carefully before use.

Reagent	Volume (µL)	Final concentration
PlexTaq® 5x qPCR Multiplex Master Mix	4	1x
∞Forward primer (10 µM)	0.4	0.2 µM (0.05–1 µM)
∞Reverse primer (10 µM)	0.4	0.2 µM (0.05–1 µM)
∞Probe	x	0.2 µM (0.05-0.3 µM)
DNA/cDNA template	x	<300 ng* DNA
Nuclease-free water	Up to 20 µL final volume	
Total volume	20 µL	

∞ Primers and probes should be specific to the target DNA/cDNA of interest. The recommended T_m for primers is 58°C – 62°C, and the T_m for probes should be 65°C – 70°C. Optimal amplicon length is 60 – 300 bp.

* Suggested template concentration should be 1 ng – 300 ng (genomic DNA) or 1 pg – 1 ng (plasmid/viral DNA).

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Instrument and program set-up

Example thermocycling conditions for PCR. Optimize to obtain best performance.

Cycles	Steps	Temperature	Time
1	Initial denaturation (optional)	95 °C	2 min
25-40	Denaturation	95 °C	15 sec**
	Annealing / extension*	60 °C	60 sec**

* Typically, the annealing temperature is about 3°C below the calculated melting temperature of the primers used.

** Suggested cycling times depend strongly on the cycler, template concentration, and amplicon length. For some probe systems a separate annealing and extension steps may be necessary.

Technical information and support

For technical enquiries or assay development support, please contact us via e-mail at: mdx@medixbiochemica.com.

Additional information and technical resources are available on our website at: info.medixbiochemica.com/resources