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2x qPCRBIO Genotyping Mix Hi-ROX

Product description:

Combined with the latest advancements in polymerase technology and advanced buffer chemistry qPCRBIO Genotyping Mix offers market leading performance with minimal optimisation.

qPCRBIO Genotyping Mix is a kit designed for use in dual-labeled probe based genotyping assays including Taqman™, Molecular Beacon® and Scorpion probe® genotyping. qPCRBIO Genotyping Mix is fully compatible with ABI TaqMan Pre-Designed SNP Genotyping assays.

qPCRBIO Genotyping Mix uses proprietary small molecular inhibitor technology that prevents formation of primer-dimers to improve reaction sensitivity and specificity.

High-throughput screening has resulted in a buffer system that allows efficient amplification from GC-rich and AT-rich templates, under fast and standard cycling conditions.

Pack Size	Format	Presentation
100 x 20 µl rxns	2x ReadyMix	1 x 1 ml
500 x 20 µl rxns	2x ReadyMix	5 x 1 ml
2000 x 20 µl rxns	2x ReadyMix	20 x 1 ml

Shipping and storage

On arrival the kit should be stored at -20˚C. If stored correctly the kit will retain full activity for 12 months. The kit can go through 30 freeze/thaw cycles with no loss of activity.

Limitations of product use

The product may be used only for in vitro research purposes.

Technical support

For technical support and troubleshooting please email technical@pcrbio.com the following information:

Amplicon size
Reaction setup
Cycling conditions
Screen grabs of amplification traces and melting profile

Instrument compatibility

Manufacturer	Instrument	Lo-ROX	Hi-ROX
Analytica Jena	qTower	Yes	Yes
Applied Biosystems	7500, 7500 FAST, Viia7™	Yes	No
Applied Biosystems	7000, 7300,7700,7900, 7900HT, 7900HT FAST, StepOne™, StepOne™ Plus	No	Yes
Bio-Rad®	iCycler®, MyiQ®, iQ ™5, Opticon™, Opticon™2, Chromo4™, MiniOpticon™, CFX96™, CFX384™	Yes	No
Cepheid®	Smartcycler®	Yes	Yes
Eppendorf	Mastercycler® ep realplex, Mastercycler® realplex 2S	Yes	Yes
Illumina®	Eco™	Yes	Yes
Qiagen/Corbett	Rotor-Gene™ 3000, 6000, Q	Yes	Yes
Roche Applied Science	Lightcycler®480, Lightcycler®Nano	Yes	Yes
Stratagene (Agilent)	MX 4000P®, MX 3000P®, MX 3005P®	Yes	No
Takara	Cycler Dice®	Yes	Yes
Techne	Quantica®	Yes	Yes

Primer design: For efficient amplification under fast cycling conditions we recommend amplicon lengths between 80bp and 200bp. Amplicon lengths should not exceed 400bp. Primers should have a predicted melting temperature of around 60˚C, using default Primer 3 settings, 3mM $MgCl_2$ (http://frodo.wi.mit.edu/primer3/). For Taqman™ probes choose probe close to 5' primer, avoid terminal guanosine residues. The probe Tm should be approximately 10˚C higher than the primer Tm.

Template: Use between 1 and 20pg human genomic DNA per reaction. For accurate allele calling similar amounts of template must be used in all wells of the same run.

Reaction setup

1. Before starting, briefly vortex 2x qPCRBIO Genotyping Mix.
2. Prepare a master mix based on following table:

Reagent	20µl reaction	Final concentration	Notes
2x qPCRBIO Genotyping Mix	10µl	1x	
Forward primer (10µM)	0.8µl	400nM	See above for optimal primer design
Reverse primer (10µM)	0.8µl	400nM	
Probe (10µM)	0.4µl	200nM	
Template DNA	1 to 20pg human genomic	variable	See above for template considerations
PCR grade dH_2O	Up to 20µl final volume		

3. Program the instrument using following conditions, acquiring data on the appropriate channel:

Cycles	Temperature	Time	Notes
1	95˚C	2min	Polymerase activation, 2 minutes for cDNA and 3 minutes for genomic
40	95˚C 55-60˚C	15 seconds 60 seconds	Denaturation Anneal/Extension, do not exceed 60 seconds, for initial experiments use 57˚C