qPCRBIO **Probe Mix**

- High efficiency in multiplex reactions
- Rapid extension rate for early Ct values
- Market-leading sensitivity

qPCRBIO Probe Mix is a universal kit designed for use in all probe-based real-time PCR assays. Whether your application is for singleplex or multiplex quantification, or diagnostic assays, this cutting edge real-time PCR enzyme mix will guarantee maximum specificity of your assays.

Features

- High efficiency in multiplex reactions
- Rapid extension rate for early Ct values
- Market leading sensitivity - increased detection limits
- Compatible on all qPCR platforms with standard and fast cycling conditions
- Efficient amplification from GC-rich and AT-rich templates
- Antibody-mediated hot start technology
- Blue mix available for easy sample visualisation during pipetting

Applications

- Absolute quantification
- Relative gene expression analysis
- TaqMan®, Scorpions® and molecular beacon probes
- Low copy number target genes
- Multiplex or singleplex
- Diagnostic qPCR
- Genotyping & allelic discrimination

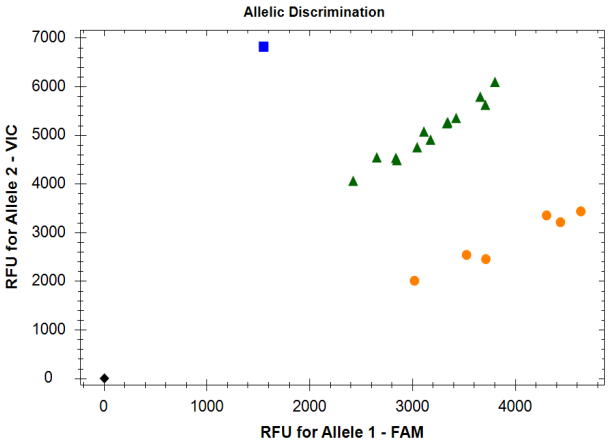

Figure 1. Allelic discrimination for genotyping

TaqMan probes designed for SNP rs1726866 in codon 262 of the Taste 2 Receptor Member 38 (TAS2R38) gene were used in duplex reaction (VIC probe for T allele, FAM probe for C allele) to screen for this polymorphism in a population of 20 subjects, starting from extracted genomic DNA. Based on fluorescence signal, subjects could be classified as non taster (homozygous for T allele, blue squares), super taster (homozygous for C allele, yellow circles), or intermediate taster (heterozygous, green triangles) for phenylthiocarbamide (bitter taste). Black diamonds indicate no template control. 2µL genomic DNA, extracted from epithelial cells (buccal swabs) using PCRBIO Rapid Extract Lysis Kit, were added to the reaction mix. Cycling conditions were 95˚C 2min, 50 cycles of 95˚C 10sec, 60˚C 30sec on a Biorad CFX instrument.

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simplifying research

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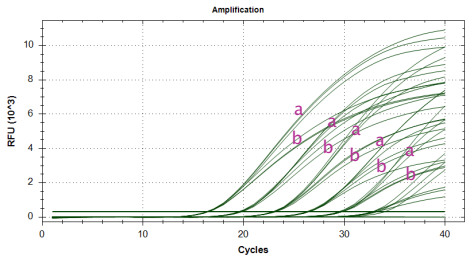
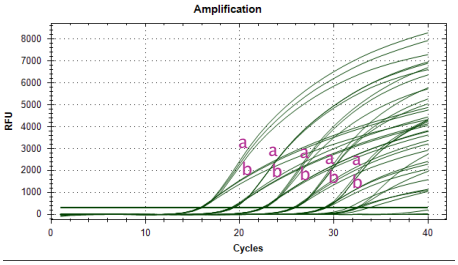
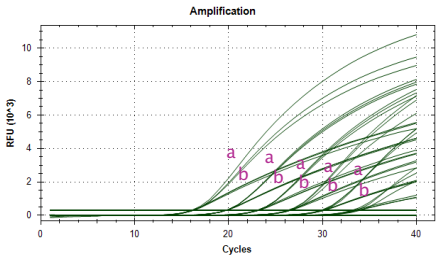
Experiment 1-qPCRBIO Probe Mix
a=Singleplex b=Quadplex



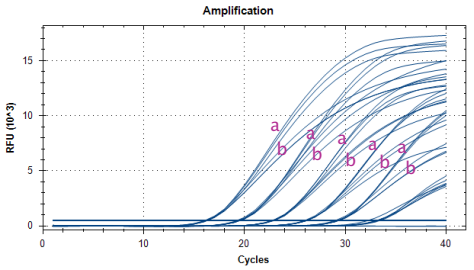
Experiment 2-Invitrogen EXPRESS
a=Singleplex b=Quadplex



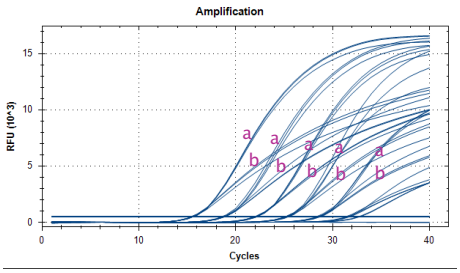
Experiment 3-Biorad Ssofast Probe Mix
a=Singleplex b=Quadplex



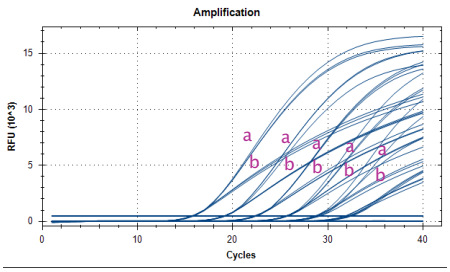
Experiment 4-qPCRBIO Probe Mix
a=Singleplex b=Quadplex



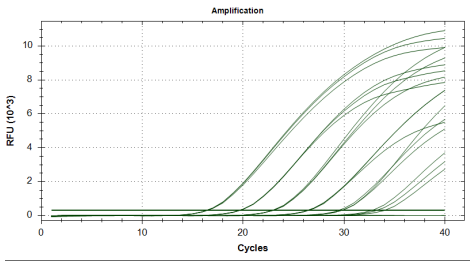
Experiment 5-Invitrogen EXPRESS
a=Singleplex b=Quadplex



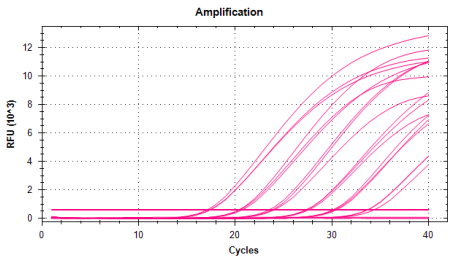
Experiment 6-Biorad Ssofast Probe Mix
a=Singleplex b=Quadplex



Experiment 7-qPCRBIO Probe Mix
Singleplex sensitivity test ACVR2B



Experiment 8-qPCRBIO Probe Mix
Singleplex sensitivity test LIMK1



Experiment 9-qPCRBIO Probe Mix
Singleplex sensitivity test ACVR1B

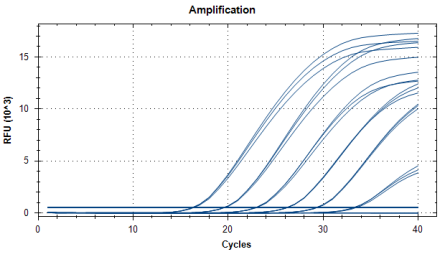


Figure 2. qPCRBIO Probe Mix competitor comparison in singleplex and multiplex assays

Experiments 1, 2 and 3 show TaqMan probe amplification traces of human gene ACVR2B in singleplex and in quadplex (ACVR2B, LIMK1, ACVR1B and CDK7) from a cDNA dilution series. a) traces indicate singleplex reactions, b) traces indicate quadplex reactions. qPCRBIO Probe Mix was tested against the latest competitor mixes from Invitrogen (experiment 2) and Biorad (experiment 3). qPCRBIO Probe Mix shows the least PCR inhibition when in multiplex compared to Invitrogen and Biorad mixes. This is evident in more delayed amplification traces in quadplex (b) compared to singleplex (a). Experiments 4, 5 and 6 show TaqMan probe amplification traces of human gene LIMK1 in singleplex and quadplex (ACVR2B, LIMK1, ACVR1B and CDK7). As with experiments 1, 2 and 3 LIMK1 amplification is less inhibited in multiplex in the PCR Biosystems probe mix than the competitor mixes tested. Cycling conditions were 95˚C 2min, 40 cycles of 95˚C 10sec, 60˚C 15sec on Biorad CFX instrument.

Experiments 7, 8 and 9 show TaqMan probe amplification traces from plasmid dilution series of $1x10^6$ copies to 10 copies of DNA. For each gene qPCRBIO Probe Mix amplified with 100% efficiency and detected 10 copies of DNA.

Catalogue Number	Product Name	Pack Size	Presentation
PB20.21-01	qPCRBIO Probe Mix Lo-ROX	100 x 20µL rxns	1 x 1mL
PB20.21-05		500 x 20µL rxns	5 x 1mL
PB20.21-20		2000 x 20µL rxns	20 x 1mL
PB20.22-01	qPCRBIO Probe Mix Hi-ROX	100 x 20µL rxns	1 x 1mL
PB20.22-05		500 x 20µL rxns	5 x 1mL
PB20.22-20		2000 x 20µL rxns	20 x 1mL
PB20.23-01	qPCRBIO Probe Mix No-ROX	100 x 20µL rxns	1 x 1mL
PB20.23-05		500 x 20µL rxns	5 x 1mL
PB20.23-20		2000 x 20µL rxns	20 x 1mL
PB20.24-01	qPCRBIO Probe Mix Separate-ROX	100 x 20µL rxns	[1 x 1mL mix] & [1 x 200µL ROX]
PB20.24-05		500 x 20µL rxns	[5 x 1mL mix] & [1 x 200µL ROX]
PB20.24-20		2000 x 20µL rxns	[20 x 1mL mix] & [4 x 200µL ROX]

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