

FOR RESEARCH USE ONLY!

ExpressTaq™ qPCR MasterMix

03/21

(Catalog # M1509-500; 500 Rxns; Store at -20 °C)

I. Introduction:

Biovision's ExpressTaq™ qPCR MasterMix is designed for TaqMan probe based real-time qPCR analysis of DNA samples. The components in the 2X MasterMix include dNTPs, ExpressTaq™ DNA polymerase, MgCl₂ and other proprietary buffer components. These components have been developed for **superior and sensitive performance in less than one hour**. ROX reference dye is provided separately, making it universally compatible with most qPCR instruments. The MasterMix is suitable for SNP genotyping assays, gene expression analysis, microarray validation, and high throughput screening applications.

II. Key Features:

- Reaction time is less than 1 h
- High Sensitivity
- Superior Performance
- TaqMan probe based qPCR

III. Applications:

- SNP genotyping assays, gene expression analysis, microarray validation, and high throughput screening applications

IV. Contents:

Components	M1509-500 (500 Rxns)	Part Number
ExpressTaq™ qPCR MasterMix	4 x 1.25 ml	M1509-500-1
ROX Reference Dye	50 µl	M1509-500-2

V. User Supplied Reagents and Equipment:

- Pipettes, Pipette tips
- PCR tubes
- Nuclease free water
- Primers (forward and reverse)
- DNA Template
- TaqMan probe
- QPCR instrument

VI. Shipping and Storage Conditions:

The MasterMix is shipped in dry ice. All the components should be stored at -20 °C.

VII. Protocol:

The recommended amount of ROX Reference Dye to be added into the MasterMix may vary depending on the qPCR machine type. Please refer to the table in the selection guide for information on ROX and qPCR machine type.

- No ROX equipment: Not needed.
- Low ROX equipment: 1 µl/1.25 ml MasterMix.
- High ROX equipment: 11 µl/1.25 ml MasterMix.

1. Thoroughly thaw and mix the individual components before use and **assemble the reaction** on ice.

Component	Volume
2X ExpressTaq™ qPCR MasterMix	10 µl
Forward Primer	Variable (100 – 500 nM)
Reverse Primer	Variable (100 – 500 nM)
TaqMan Probe	Variable (100 – 300 nM)
Template DNA	Variable (≤10 ng/rxn)
Nuclease-free water	up to 20 µl

2. Gently mix the reaction components and briefly centrifuge.

3. Thermocycling **conditions** for standard PCR:

Step	Temperature	Duration		Cycles
		Standard	Fast	
Enzyme Activation	95 °C	3 min	20 sec	1
Denaturation	95 °C	15 sec	1 sec	40
Annealing/Extension	60 °C	1 min	10 sec	

4. MasterMix components are light sensitive; avoid exposure to light.

5. Start qPCR as soon as the reaction mixture is prepared and always keep the reaction mixture chilled in on ice prior to loading on instrument.

6. Use either the Standard or Fast qPCR program for your appropriate application.

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VIII. Selection Guide For ROX and qPCR Machine Type:

MACHINE TYPE	qPCR MACHINE
High ROX Machines	<ul style="list-style-type: none"> • ABI® 7000, 7300, 7700, 7900, 7900HT, StepOnePlus™, StepOne™, OpenArray, PRISM™ Sequencing Detection Series • Biometra TOptical • Fluidigm BioMark™ • Wafergene SmartChip System • TianLong TL998 System
Low ROX Machines	<ul style="list-style-type: none"> • ABI® 7500, 7500 Fast, Viia™ 7, QuantStudio, QuantStudio 3/5/6/7 • BioGene InSyte™ • Illumina Eco • Analytikjena qTower Series • Stratagene® Mx3000, Mx3005, Mx4000
No ROX machines	<ul style="list-style-type: none"> • BioRad® CFX96, CFX384, Chromo4™, CFX Connect™, Opticon 2, MiniOpticon™ • Roche LightCycler® (480, 1536, Nano) • MJ Research Opticon™, Opticon™ 2, Chromo® 4 • Eppendorf™ Realplex 4 • BioGene SynChron™ • Corbett Rotor-gene® (3000, 6200, 62H0, 6500, 65H0, 6600) • Eppendorf Mastercycler® realplex (s, 4, 4s), Pro (S, 384), Nexus (gradient, eco, flat) • Cepheid SmartCyler, GeneXpert • Enigma™ ML • Idaho LightScanner® (24, 32), RapidCycler®2, R.A.P.I.D (LT, LT Food), RAZOR EX, JBAIDS • Qiagen Rotor-Gene™ (Q, 6000) • Takara Dice™ • Thermo Scientific PikoReal • DNA-Technology DT96, DTlite, DT-322 • Bioer LineGene (3310/3320, K FQD-48A, I, II, 9620, 9640, 9660, 9680) • Bioneer Exicycler™

IX. Related Products:

BioVision Product Name	Cat. No.	Sizes
HiFidelity™ 2X PCR MasterMix	M1507	800 Rxns
ExpressTaq™ DNA Polymerase	M1504	400 Rxns
HiFidelity™ DNA Polymerase	M1505	400 Rxns
FireTaq™ DNA Polymerase	M1506	400 Rxns
ExpressTaq™ 2X PCR MasterMix	M1508	800 Rxns
HiFidelity™ One Step RT Kit	M1503	100 Rxns

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