

Product Information Sheet

Product Name: rEVALution 2X qPCR Master Mix with separate ROX*

Concentration: 2X

Ordering Information:

Item Number	Total Volume Received	Quantity Received	Total number of reactions which can be obtained when using the following reaction sizes	
			20µL Reactions	10µL Reactions
SS-RQ-10	RQ-NR: 0.1mL, ROX: 5uL	RQ-NR: 1x0.1mL, ROX:1x5uL	10	20
RQ -100	RQ-NR: 1mL, ROX: 150uL	RQ-NR:1 x 1mL, ROX: 1x150uL	100	200
RQ -500	RQ-NR: 5mL, ROX: 150uL	RQ-NR:5 x 1mL, ROX: 1x150uL	500	1000
RQ -1000	RQ-NR: 10mL, ROX: 300uL	RQ-NR:10x1mL, ROX: 2x150uL	1000	2000
RQ -2500	RQ-NR: 25mL, ROX: 750uL	RQ-NR:25x1mL, ROX: 5x150uL	2500	5000

Storage and Handling:

Store at -20°C upon arrival.

Product Description:

Empirical's rEVALution is 2X concentrated and ready to use hot-start qPCR Master Mix with EvaGreen® dye, FlashTaq DNA polymerase, 400µM dCTP, 400µM dGTP, 400µM dATP, 400µM dTTP, and 5mM MgCl₂. EvaGreen® is a dsDNA-binding dye. It is cell membrane impermeable, non-cytotoxic, non-mutagenic, and safe for aquatic life. EvaGreen® possesses similar absorption and emission spectra as SYBR® Green I.

FlashTaq is an exceptional chemically modified hot-start Taq DNA polymerase with an activation time of 2 minutes at 95°C. Taq DNA Polymerase gene is isolated from *Thermus aquaticus* YT1 and expressed in *E. coli*.

A 25µM ROX reference dye is supplied separately for use with some real time machines.

Protocol: The following reaction set up and general cycling conditions are recommended but can vary depending on the template and primers being used.

Reaction set-up for 20uL reaction volume Table 1:

Component	Volume	Final Concentration
rEVALution 2X qPCR Master Mix	10 µl	1X
ROX reference dye, 25µM	X µl	Table 2
Primer, 10µM	X µl	0.1-1.0µM
Template	X µl	> 0.1ng
Nuclease Free Water to volume	X µl	N.A.

* This product is for "Research Use Only. Not for use in diagnostic procedures".

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Table 2: ROX concentration recommendation for different instrument

Type	Instrument		ROX final concentration
	Company	Instrument Name	
No ROX	Roche	LightCycler 480, LightCycler 2.0	None
	BioRad	iCycler, MyiQ, MiQ 2, iQ 5, CFX-96, CFX-384, Chromo4, MJ Opticon, Option2, MiniOpticon	
	Qiagen	Roto-Gene Q, Roto-Gene3000, Roto-Gene 6000	
	Illumina	Eco RealTime PCR System	
	Eppendorf	Mastercycler realplex	
	Cepheid	SmartCyler	
Low ROX	ABI	7500, 7500 Fast	30nM
	Stratagene	MX4000P, MX3000P, MX3005P	
High ROX	ABI	5700, 7000, 7300, 7700, 7900, 7900HT, 7900HT Fast, StepOne, StepOne plus, Vii7	300nM

Thermal cycling conditions:

Table 3: Three Step cycling

Cycling Step	Temperature	Holding Time	Cycles
Enzyme activation	95°C	2 min	1
Denaturation	95°C	5sec	40
Annealing	55-60°C	5sec – 20sec	
Extension	72°C	25sec	

Notice to Purchaser:

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