

qRT-PCR

Liangtao Wu

Abstract

Gene specific primers are retrieved from Primer Premier 6.0 and National Center for Biotechnology Information Software. Fluorescent dye are SYBR® Premix Ex Taq™ II (Tli RNaseH Plus)(TaKaRa,China).

Citation: Liangtao Wu qRT-PCR. [protocols.io](https://doi.org/10.17504/protocols.io.i3pcgmn)

[dx.doi.org/10.17504/protocols.io.i3pcgmn](https://doi.org/10.17504/protocols.io.i3pcgmn)

Published: 21 Jul 2017

Protocol

Gene specific primers are retrieved from Primer Premier 6.0 and National Center for Biotechnology Information Software. Fluorescent dye are SYBR® Premix Ex Taq™ II (Tli RNaseH Plus)(TaKaRa,China).

Step 1.

The reagent composition	Volume 20 ul
SYBR Premix Ex Tap	5.0 ul
Forward Primer (10 uM)	0.5 ul
Reverse Primer (10 uM)	0.5 ul
cDNA	1.0 ul
ddH ₂ O	to 10ul
1. 95°C 30sec	
2. 95°C 5sec → 51°C-60°C 30sec 40 cycles	
3. 72°C 45sec.	

Gene specific primers are retrieved from Primer Premier 6.0 and National Center for Biotechnology Information Software. Fluorescent dye are SYBR® Premix Ex Taq™ II (Tli RNaseH Plus)(TaKaRa,China).

Step 2.

After PCR is finished, remove the tubes from the machine. The PCR specificity is examined by 3% agarose gel using 8 ml from each reaction.

Step 3.

Put out the tubes from Real time PCR instrument(Bio-Rad USA) and perform dissociation curve analysis with the saved copy of the setup file.

Step 4.

Analyze the real-time PCR result with the BioRadCFXManager software. Check to see if there is any bimodal dissociation curve or abnormal amplification plot.

Step 5.

Exported the results to Excel software, and the expression values are calculated according to the 2- $\Delta\Delta CT$ method.

Step 6.

Exported the results to Excel software, and the expression values are calculated according to the 2- $\Delta\Delta$ CT method.

Step 7.