

PURIC Water Information

Puric-α UPW evaluation for Real time PCR

PCR (Polymerase Chain Reaction) is the technology to copy specific DNA. Real time PCR is the analysis method to monitor amplification amount of DNA in real time. In experiments using RNA, we have to take care not to contain RNase (degrading enzyme). So, we would like to introduce the measurement example of PCR using Puric-α (UP spec) UPW.

Method

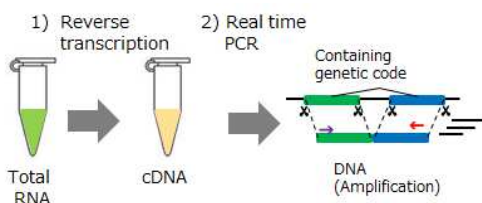
1. Extract RNA from Mesothelioma cell Line (a kind of cancers) and fabricate cDNA* (complementary DNA) by reverse transcription.

2) Measure the expression level of β-actin using DNA by real time PCR

3 kinds of UPW (PCR kit UPW, Puric-α UPW, commercial bottle of UPW) are compared for this analysis.

*1 Original substances for PCR

*2 A kind of protein



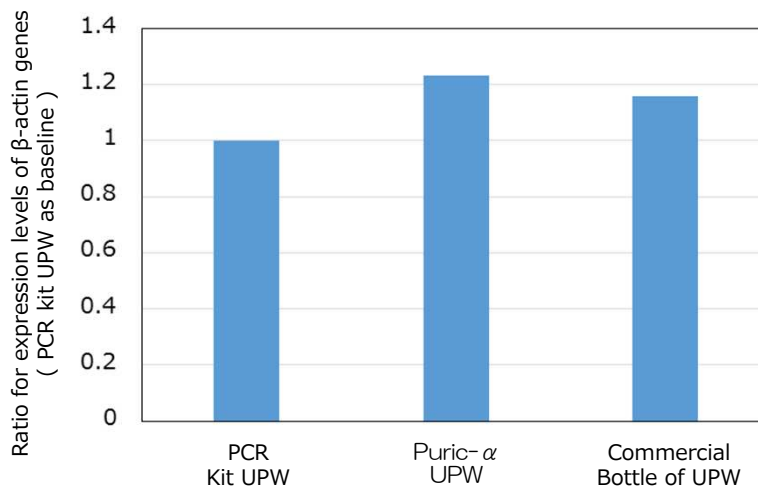
UPW	Dispensing method
PCR kit UPW	Dispense UPW in 1.5ml micro tube attached to PCR enzyme by micropipette
Puric-α UPW	Dispense into 1.5ml micro tube from Puric-α and collect by micropipette
Commercial bottle of UPW	Dispense into 1.5ml micro tube and collect by micropipette

Used equipment

- Real time PCR :StepOnePlus (Thermo Fisher Scientific)
- Ultrapure water equipment : Puric UP-0090 α-0U0 + UV 20L tank + Dispenser (Organo)

Results

Comparison on expression levels of β-actin genes



Summary

3 kinds of UPW were compared as the standard of PCR kit UPW (ratio 1). The Expression levels of β-actin genes for Puric-α UPW is the same level with PCR kit UPW and commercial bottle of UPW. It was confirmed that Puric-α can be used for RNase free and PCR water by adopting UF for final filter. The users of Puric-α appreciate that, PCR water is not always necessary even though they have keep using PCR kit water. It is because Puric-α with UP incorporated in circulation line, can produce high purity of water suitable for bio experiments.

Date provided : National Cancer Center (Japan) R&D Cell Bioengineering

