Product Application

RNA Extraction from Mouse Skin by Maxwell RSC

Kit : Maxwell® RSC simplyRNA Tissue Kit (Catalog #AS1340)
Analyses : Reverse Transcription >>> realtime PCR
Sample Type(s) : Mouse Skin
Input : 50-100mg skin tissue

Caution: In order to protect RNA from highly active endogenous RNase in skin tissue, please handle the sample following preparation method.

- Once the skin tissue is taken from mouse, freeze it in -80C or liquid nitrogen soon.
- Crush the frozen sample
- Use AGPC Reagent (TRIzol, ISOGEN etc.)

Protocol :

1. Take a skin tissue and freeze it in -80C or liquid nitrogen immediately to suppress endogenous RNase activity.
2. According to the instruction of a beads-beating device, crush skin tissue in frozen state.
3. Add 1ml TRIzol Reagent per 50-100mg skin tissue, mix thoroughly by vortex.
4. Incubate for 5 minutes in ambient temperature. Add 0.2ml chloroform per 1ml TRIzol Reagent. Mix thoroughly and incubate for 2-3 minutes in ambient temperature.
5. Centrifuge at 12,000×*g,* 15 minutes at 4C.
6. Take the upper aqueous phase up to 400µl at the maximum and transfer it into a new centrifuge tube.
7. Add the same volume of Lysis Buffer into the tube and mix it quickly by vortex.
8. Apply the whole lysate into well #1 of Maxwell RSC Cartridge and run Maxwell RSC method.
9. Put 50µl of Nuclease-Free Water in Elution Tube.

Conclusion :

When total RNA was purified from mouse skin with the standard protocol of Maxwell RSC simplyRNA Tissue Kit, the typical RIN value gained with Bioanalyzer is in low

range. The reason of this low RIN value is supposed that the activity of endogenous RNase is very high and it’s not fully suppressed only by guanidine. In this application, we are showing that it’s possible to inactivate RNase by adding phenol such as TRIzol and ISOGEN, to protect the degradation of RNA and to get high quality intact RNA as the result.