Tissue RNA Isolation Kit (Catalog# TBS6003)

Fast One Step Method

DESCRIPTION

Isolation of high quality RNA is an important first step in gene expression studies such as RT-PCR, qRT-PCR and array analysis.TBS Tissue RNA Isolation Kit is designed to isolate total RNA from Tissues. Under acidic conditions of reagent, total RNA remains in the upper aqueous phase , while most of DNA and proteins remain either in the interphase or in the lower organic phase. Total RNA is then recovered by precipitation with isopropanol and can be used for several applications. This kit can significantly improve the quantity and quality of RNA.

APPLICATIONS

Direct Assays: total RNA isolation from tissue sample. The amount of RNA isolated depends on the tissue used for isolation. The yield of total RNA from 100mg of muscle tissue should range from 100 to 150 µg and up to 800 µg can be isolated from 100 mg of liver tissue. The A260/A280 ratio of the isolated RNA should be above 1.8.

KEY FEATURES

Simple and convenient: There is no special equipment need.
High yield rate: This method gets higher yield rate of RNA than spin column method.
Versatility: multiple RNAs include microRNA.

KIT CONTENTS (200 samples)

Reagent: 2 x 100ml, RNase-free Water 15ml

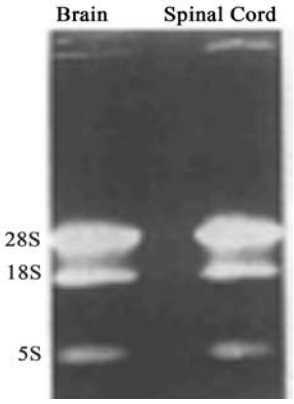
Storage conditions. The kit is shipped at room temperature. Store the reagent at 4°C. Shelf life: 12 months after receipt.

REQUIRED MATERIALS NOT PROVIDED WITH THE KIT

Chloroform, Isopropanol, Ethanol, 1.5 ml tubes

PROCEDURES

1. Fresh tissue is preferable for optimal RNA isolation. Add 1ml RNA Extraction Reagent per 100 mg fresh tissue in 1.5 ml microtube, minced on ice using sterile scalpels and sterile scissors and homogenize with a few strokes in a glass- Teflon homogenizer.
2. Add 0.2ml chloroform and shake vigorously by hand or vertex for 10s
3. Cool the samples on ice for 15 min. Centrifuge for 15 min at 12,000g at 4°C.
4. Transfer carefully the upper aqueous phase (mostly RNA 0.5ml) to a clean tube.
5. Add 0.5ml (1 vol.) of isopropanol, mix well and incubate the sample for at least 1 h at -20°C.
6. Centrifuge at 12,000g at 4°C for 20 min to precipitate the RNA, Discard the supernatant carefully.
7. Wash the RNA pellet with 1ml of 75% ethanol, centrifuge at 10,000g at 4°C for 5min. Discard the supernatant and repeat wash once.
8. Air dry for 5-10 min (Never let the RNA pellet air-dry completely).
9. Dissolve the RNA pellet in 100-200 µl of RNase-free water.
10. Assess concentration and quality of RNA with spectrophotometric readings at wavelengths of 260nm and 280nm (Pure preparation of RNA have an A260/A280 ratio of between 1.0 and 2.0). Store the RNA samples at -80°C.



Total RNA isolated from mouse brain and spinal cord

REFERENCES

1. Chomczynski P & Sacchi N. Single-step method of RNA isolation by acid guanidinium thiocyanate-phenol-chloroform extraction. Anal. Biochem. 162: 156-159 (1987).
2. Chomczynski P & Sacchi N. The single-step method of RNA isolation by acid guanidinium thiocyanate-phenol-chloroform extraction: twenty-something years on. Nature Protocols, 1: 581-585(2006)

RELATED PRODUCTS:

Cell RNA Isolation Kit (TBS6001)
Blood RNA Isolation Kit (TBS6002)
Nucleic Acid Precipitation Enhancer (TBS6010)
Mouse Tail DNA Extraction(TBS6005)
Tissue DNA Extraction(TBS6006)
Cell DNA Extraction Kit(TBS6007)
2x qPCR Hot Start Super Mix(TBS4001)
2x PCR Hot Start Master Mix(TBS4002)
2x Genotyping PCR Ready Mix(TBS4003)
2x PCR Red Mix(TBS4004)
Reverse Transcription Reaction Kit (TBS4006)

This product is for *in vitro* research use only and is not intended for use in humans or animals in therapeutic or diagnostic procedures.

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