TransZol Up

Cat.No. ET111

Storage: at 2-8°C in dark for one year

Description

TransZol Up is a ready-to-use reagent for the isolation of total RNA from cells and tissues. Unique lysis buffer is used to disrupt cells. After centrifugation, the solution is separated into an upper colorless aqueous phase containing RNA and a lower pink organic phase. RNA is precipitated and recovered with isopropanol. Proteins can be recovered from organic phase with isopropanol. Compared with other total RNA extraction reagents, *TransZol* Up provides a powerful lysis buffer to extract RNA from a variety of species.

Highlights

- Suitable for isolating RNA from a variety of species including animal, plant and bacteria.
- Superior lysis capability and higher RNA yield.
- The whole procedure can be completed in one hour.
- Pink solution for easy visualizing different phases.
- Unique dissolving solution for long-term RNA storage.

Kit Contents

Component	ET111-01
TransZol Up	100 ml
RNA Dissolving Solution	15 ml

Procedures

Reagents provided by customers: chloroform, isopropanol, 75% ethanol (prepared with DEPC-treated water) and RNase-free water

1. Homogenization

a. Adherent cells

① Wash culture dish once with 1×PBS

② Detach cells with cell spatula. Add 1 ml of *TransZol* Up to per 10 cm^3 culture dish. Pipetting up and down to lysis the cells.

③ Transfer lysate containing cells to a microcentrifuge tube.

④ Incubate at room temperature for 5 minutes.

b. Suspension cells

① Transfer suspension cells including culture dish to a microcentrifuge tube. Centrifuge the sample at 8,000×g for 2 minutes at 2-8°C, discard the supernatant.

② Add 1 ml *TransZol* Up to per 10^7 cells.

③ Pipetting up and down until no visible precipitates are present in lysate.

④ Incubate at room temperature for 5 minutes.

c. Animal tissue and plant materials

① After weighing, quickly transfer the frozen sample into mortar with liquid nitrogen. Grind thoroughly to a powder. Additional liquid nitrogen can be used if needed. Incomplete grind can affect RNA yield and quality.

② Transfer the tissue powder to a microcentrifuge tube. Add 1 ml of *TransZol* Up to per 50-100 mg tissue. Homogenize tissue samples with a homogenizer and repeatedly pipette up and down.

③ Incubate at room temperature for 5 minutes.

2. Add 0.2 ml of chloroform per ml *TransZol* Up . Shake the tube vigorously by hand for 30 seconds. Incubate at room temperature for 3 minutes.
3. Centrifuge the sample at 10,000×g for 15 minutes at 2-8°C. The mixture separates into a lower pink organic phase, an interphase, and a colorless upper aqueous phase which contains the RNA. The volume of the aqueous upper phase is around 50% volume of *TransZol* Up reagent.
4. Transfer the colorless, upper phase containing the RNA to a fresh RNase-free tube. Add 0.5 ml of isopropanol for per ml *TransZol* Up used. Mix thoroughly by inverting tube. Incubate at room temperature for 10 minutes.
5. Centrifuge the sample at 10,000×g for 10 minutes at 2-8°C. Discard the supernatant. Colloidal precipitate can be seen at the wall and the bottom of the tube.
6. Add 1 ml of 75% ethanol (prepared with DEPC-treated water), vortexing vigorously (add at least 1 ml of 75% ethanol for 1 ml of *TransZol* Up used).
7. Centrifuge the sample at 7,500×g for 5 minutes at 2-8°C.
8. Discard the supernatant. Air-dry the RNA pellet (for about 5 minutes).
9. RNA pellet is dissolved in 50-100 µl of dissolving solution.
10. Incubate at 55-60°C for 10 minute. For long-term storage, store the purified RNA at -70°C.

Note

It is important to mix well after adding chloroform to ensure extraction performance.