NAUTIAGENE

Product Information

NautiaZ Cell/Blood Total RNA Mini Kit

(100/300 prep)

Cat.No. : NGCRZ-S100/NGCRZ-S300
Sample : 10^7 Culture cells
300 µl Blood
Yield : Up to 30 µg

NGCRZ-S100	NautiaZ Cell/Blood Total RNA Mini Kit (100 prep)
NGCRZ-S300	NautiaZ Cell/Blood Total RNA Mini Kit (300 prep)
NGBRZ-S100	NautiaZ Bacteria/Fungi RNA Mini Kit (100 prep)
NGBRZ-S300	NautiaZ Bacteria/Fungi RNA Mini Kit (300 prep)
NGTRZ-S100	NautiaZ Tissue Total RNA Mini Kit (100 prep)
NGTRZ-S300	NautiaZ Tissue Total RNA Mini Kit (300 prep)
NGPRZ-S100	NautiaZ Plant Total RNA Mini Kit (100 prep)
NGPRZ-S300	NautiaZ Plant Total RNA Mini Kit (300 prep)
NGMRZ-S050	NautiaZ microRNA Mini Kit (50 prep)
NGVN-S100	Nautia Viral Nucleic Acid Extraction Kit (100 prep)
NGVN-S300	Nautia Viral Nucleic Acid Extraction Kit (300 prep)

Ver. 2020-06

Contents

	NGCRZ-S100T	NGCRZ-S100	NGCRZ-S300
CR1 Buffer	2 ml x2	110 ml	110 ml x3
CR2 Buffer	2 ml	45 ml	125 ml
W1 Buffer	2 ml	45 ml	125 ml
W2 Buffer*	300 ul x2	15 ml	25 ml x2
Elution Buffer	1 ml	10 ml	30 ml
RZ Column	4 pcs	100 pcs	300 pcs
Collection Tube	4 pcs	100 pcs	300 pcs
User Manual	1	1	1

*Add 1.2 ml x2 / 60 ml / 100 ml x2 ethanol (96-100%) to W2 Buffer prior to the initial use

Buffer Preparation

• Add ethanol (96-100%) to the Wash Solution prior to first use:

	NGCRZ-S100T	NGCRZ-S100	NGCRZ-S300
W2 Buffer ethanol (96 ~ 100%)	300 ul x2 1.2 ml x2	15 ml 60 ml	25 ml x2 100 ml x2

Additional Requirements

1. RNase-free microcentrifuge tubes
2. 70% ethanol
3. ß-Mercaptoethanol

Important Notes

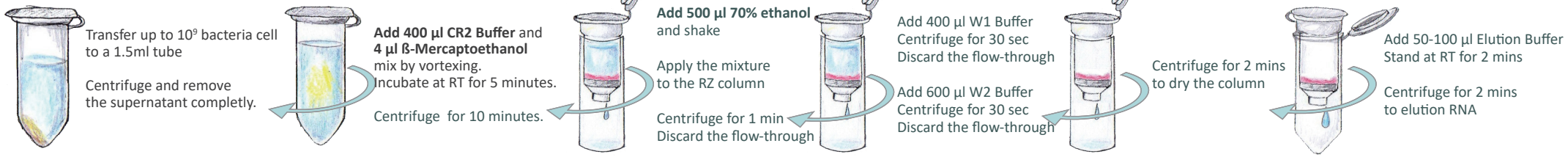
1. Buffer contains chaotropic salt is harmful and irritant agent.
2. Use sterile, RNase-free pipet tips and microcentrifuge tube. Wear a lab coat and disposable gloves to prevent RNase contamination.
3. Make sure the starting sample amount is under the limit.
4. Add ethanol (96-100%) to W2 Buffer prior to the initial use.
6. All purification steps should be carried out at room temperature.
7. All centrifugations should be carried out in a table-top microcentrifuge at >12000 × g (10,000-14,000 rpm, depending on the rotor type).

Quality Control

The quality of NautiaZ Cell/Blood RNA Mini Kit is tested on a lot-to-lot basis. The kits are tested by isolation of total RNA from 300 µl of fresh human blood or 10^7 Culture cells. More than 1 µg of total RNA was quantified with a spectrophotometer and checked by formaldhyde agarose gel analysis. Finally, RT-PCR was used to ensure the quality of total RNA.

Storage

Store at room temperature.



PURIFICATION PROTOCOLS

For Culture Cells

STEP	PROCEDURE
1 Sample prepare	Transfer up to 10^7 mammalian cells to a micracentrifuge tube *(not provided)*. Centrifuge at 6,000 x g for 1 min and remove the supernatant completly.
	Add 100 µl CR1 Buffer to the tube and resuspend the cell pellet by vortexing or pipetting.
	Add 400 µl CR2 Buffer and **4 µl ß-Mercaptoethanol**, mix by vortexing. Incubate at room temperature for 5 minutes.

For Blood

STEP	PROCEDURE
1 Sample prepare	Transfer up to 300 µl blood to a RNase-free microcentrifuge tube *(not provided)*. **Add 900 µl CR1 Buffer,** then mix by insertion. Incubate the mixture on ice for 10 minutes, and invert every 5 minutes.
	Centrifuge at 4°C at 4,000 x g for 5 minutes. Remove the supernatant completely. **Add 100 µl CR1 Buffer** and resuspend the pellet by pipetting.
	Add 400 µl CR2 Buffer and **4 µl ß-Mercaptoethanol**, mix by vortexing. Incubate at room temperature for 5 minutes.

STEP	PROCEDURE
2 Cell Lysis	Centrifuge at 14,000 x g for 10 minutes. Transfer the supernatant to a clean microcentrifuge tube.
3 RNA Binding	**Add 500 µl 70% ethanol** and shake vigorously. Place a **RZ column** in Collection Tube. Transfer the sample mixture (up to 700 µl once) to RZ column and centrifuge 1 minute at 14,000 x g. Discard the flow-through and place RZ Column back in the Collection tube.
4-1 Wash	**Add 400 µl W1 Buffer** to RZ Column Centrifuge at 14,000 x g for 30 seconds. Discard the flow-through and place RZ Column back in the Collection tube.
Optional Step: DNase	*If DNA-free RNA is required, perform this optional step.* **Add 150 µl W2 Buffer (ethanol added)** into the RZ column. Centrifuge at full speed (16,000 x g) for 30 seconds. Discard the flow-through and place the RZ Column back in the Collection Tube.
	For each isolation reaction , premix **80 µl DNase I Incubation Buffer** with **2 µl DNase I** in a new sterile tube (Do not vortex!). **Add 82 µl of the DNase I solution** into the center of the RZ Column membrane and incubate at room temperature for 15 min.

4-2 Wash	**Add 600 µl W2 Buffer** (ethanol added) to RZ Column. Centrifuge at 14,000 x g for 30 seconds. Discard the flow-through and place RZ Column back in the Collection tube.
5 Dry	Centrifuge at 14,000 x g for 2 minutes to dry the column.
6 Elution	Place RZ Column to a clean 1.5 ml microcentrifuge tube *(not provided)*. **Add 50-100 µl of preheated Elution Buffer** (75°C) into the center of the column matrix.
7 Pure RNA	Stand at room temperature for 3 minutes. Centrifuge at 14,000 x g for 2 minutes to elute purified RNA.
	Store the RNA fragment at -80 °C.