X.Total RNA Extraction from Viruses

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LRT, SRT, and WRT refer to reagents from the QuickGene RNA Extraction kit, QG-RT-S2 and QG-AS-RT.

Reagents:
- Lysis Buffer (LRT),
- Solubilization Buffer (SRT)
- Wash Buffer (WRT)
- Elution Buffer (CRT)

QuickGene

QuickGene RNA tissue kit S II (RT-S2)
QuickGene AutoS RNA Tissue kit (AS-RT)

RH-X1

Viral RNA Extraction from Serum

Protocol

Vortex for 30 sec (maximum speed), adding 10 µl of 10mg/ml Carrier RNA *1 solution and 150 µl of test serum to 200 µl of LRT (TCEP added) *2.

↓

Flash spin down

↓

Incubate at room temperature : 10 min

↓ ← SRT : 185 µl

Vortex for 15 sec (maximum speed)

Flash spin down

↓ ← >99% ethanol : 185 µl

Vortex for 1 min (maximum speed)

Flash spin down

↓

Lysate

↓

Set into the device:
- QG-Mini480 or QG-Mini80*a
- QG-Auto12S or QG-Auto24S*b

*Please refer to Quick Start Guide or operation manual to know how to set sample tube.

↓

1. Apply the lysate into the cartridge
2. Pressurizing
3. Wash 1 time by Wash Buffer (WRT*4)
4. DNase treatment (if needed)
5. Wash 2 times by Wash Buffer (WRT*4)
6. Add selected volume of Elution buffer (Elution volume : 100 µl)*3 and elute total RNA into collection tube.

↓

Total RNA

Depending on sample and storage conditions, nucleic acid may not be extractable.
Therefore, we cannot guarantee accurate data.
The extracted nucleic acid contains unintended acid (ex: when extracting DNA, RNA is also extracted).

*1 Carrier RNA., which is added for prevention of virus RNA decomposition by RNase in sample and also nonspecific adsorption of a small amount of refined RNA.

The following items are included in the extraction kit:
- Lysis Buffer (LRT)
- Solubilization Buffer (SRT)
- Wash Buffer (WRT)
- Elution Buffer (CRT)

*2 Add 20 µl of 0.5mol/L TCEP per 1 ml of LRT.

Company: FUJIFILM Wako Pure Chemical Corporation
Name: 0.5mol/L TCEP Solution
Catalog No. : 207-20151

*3 The volume of the from each cartridge is 100µl. The volume of CRT can be reduced to 50 µl, but in that case, elution efficiency might be decreased.

*4 Please use ethanol added Wash Buffer (WRT)

*a QuickGene RNA tissue kit S II (RT-S2) kit is used for QG-Mini480 or QG-Mini80

*b QuickGene AutoS RNA Tissue kit (AS-RT) kit is used for QG-Auto12S or QG-Auto24S

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QuickGene

QuickGene RNA tissue kit S II (RT-S2)
QuickGene AutoS RNA Tissue kit (AS-RT)

RH-X2

Viral RNA Extraction from Bronchoalveolar lavage (endo) tracheal aspirate/ nasopharyngeal aspirate/nasal wash

Protocol

Vortex for 30 sec (maximum speed), adding 10 µl of 10mg/ml Carrier RNA *1 solution and 150 µl of test sample to 200 µl of LRT (TCEP added) *2.

↓

Flash spin down

↓

Incubate at room temperature : 10 min

↓ ← SRT : 185 µl

Vortex for 15 sec (maximum speed)

Flash spin down

↓ ← >99% ethanol : 185 µl

Vortex for 1 min (maximum speed)

Flash spin down

↓

Lysate

↓

Set into the device:
- QG-Mini480 or QG-Mini80*a
- QG-Auto12S or QG-Auto24S*b

*Please refer to Quick Start Guide or operation manual to know how to set sample tube.

↓

1. Apply the lysate into the cartridge
2. Pressurizing
3. Wash 1 time by Wash Buffer (WRT*4)
4. DNase treatment (if needed)
5. Wash 2 times by Wash Buffer (WRT*4)
6. Add selected volume of Elution buffer (Elution volume : 100 µl)*3 and elute total RNA into collection tube.

↓

Total RNA

*1 Carrier RNA., which is added for prevention of virus RNA decomposition by RNase in sample and also nonspecific adsorption of a small amount of refined RNA.

The following items are included in the extraction kit:
- Lysis Buffer (LRT)
- Solubilization Buffer (SRT)
- Wash Buffer (WRT)
- Elution Buffer (CRT)

*2 Add 20 µl of 0.5mol/L TCEP per 1 ml of LRT.

Company: FUJIFILM Wako Pure Chemical Corporation
Name: 0.5mol/L TCEP Solution
Catalog No. : 207-20151

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The volume of CRT can be reduced to 50 µl, but in that case, elution efficiency might be decreased.

*4 Please use ethanol added Wash Buffer (WRT)

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*b QuickGene AutoS RNA Tissue kit (AS-RT) kit is used for QG-Auto12S or QG-Auto24S

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Depending on sample and storage conditions, nucleic acid may not be extractable.
Therefore, we cannot guarantee accurate data.
The extracted nucleic acid contains unintended acid (ex: when extracting DNA, RNA is also extracted).

QuickGene

QuickGene RNA tissue kit S II (RT-S2)
QuickGene AutoS RNA Tissue kit (AS-RT)

RH-X3

Viral RNA Extraction from Nasopharyngeal swab or /and oropharyngeal swab

Protocol

Collect swab samples in 150 µl PBS or Saline in a 1.5ml microtube, adding 10 µl of 10mg/ml Carrier RNA *1 solution

↓

Vortex (Maximum speed) : 30 sec. Dispose the swab

↓ ← Add LRT (TCEP added) *2 : 200 µl

Incubate at room temperature : 10 min

↓

Vortex (Maximum speed) : 15 sec

Flash spin down

↓ ← SRT : 175 µl

Vortex (Maximum speed) : 15 sec

Flash spin down

↓ ← >99% ethanol : 175 µl

Vortex (Maximum speed) : 1 min

Flash spin down

↓

Lysate

↓

Set into the device:
- QG-Mini480 or QG-Mini80*a
- QG-Auto12S or QG-Auto24S*b

*Please refer to Quick Start Guide or operation manual to know how to set sample tube.

↓

1. Apply the lysate into the cartridge
2. Pressurizing
3. Wash 1 time by Wash Buffer (WRT*4)
4. DNase treatment (if needed)
5. Wash 2 times by Wash Buffer (WRT*4)
6. Add selected volume of Elution buffer (Elution volume : 100 µl)*3 and elute total RNA into collection tube.

↓

Total RNA

Depending on sample and storage conditions, nucleic acid may not be extractable.
Therefore, we cannot guarantee accurate data.
The extracted nucleic acid contains unintended acid (ex: when extracting DNA, RNA is also extracted).

*1 Carrier RNA., which is added for prevention of virus RNA decomposition by RNase in sample and also nonspecific adsorption of a small amount of refined RNA.

The following items are included in the extraction kit:
- Lysis Buffer (LRT)
- Solubilization Buffer (SRT)
- Wash Buffer (WRT)
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*2 Add 20 µl of 0.5mol/L TCEP per 1 ml of LRT.

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*b QuickGene AutoS RNA Tissue kit (AS-RT) kit is used for QG-Auto12S or QG-Auto24S

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QuickGene

QuickGene RNA tissue kit S II (RT-S2)
QuickGene AutoS RNA Tissue kit (AS-RT)

RH-X4

Virus RNA Extraction from sputum

Protocol

Collect sputum samples (100µl) in a 1.5ml microtube

↓

Add 50µl of PBS or saline,
and 10 µl of 10mg/ml Carrier RNA *1 solution

↓

Vortex (Maximum speed) : 60 sec.

↓ ← Add LRT (TCEP added) *2 : 200 µl

Incubate at room temperature : 10 min

↓

Vortex (Maximum speed) : 15 sec

Flash spin down

↓ ← SRT : 175 µl

Vortex (Maximum speed) : 15 sec

Flash spin down

↓ ← >99% ethanol : 175 µl

Vortex (Maximum speed) : 1 min

Flash spin down

↓

Lysate

↓

Set into the device:
- QG-Mini480 or QG-Mini80*a
- QG-Auto12S or QG-Auto24S*b

*Please refer to Quick Start Guide or operation manual to know how to set sample tube.

↓

1. Apply the lysate into the cartridge
2. Pressurizing
3. Wash 1 time by Wash Buffer (WRT*4)
4. DNase treatment (if needed)
5. Wash 2 times by Wash Buffer (WRT*4)
6. Add selected volume of Elution buffer (Elution volume : 100 µl)*3 and elute total RNA into collection tube.

↓

Total RNA

Depending on sample and storage conditions, nucleic acid may not be extractable.
Therefore, we cannot guarantee accurate data.
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*1 Carrier RNA., which is added for prevention of virus RNA decomposition by RNase in sample and also nonspecific adsorption of a small amount of refined RNA.

*2 Add 20 µl of 0.5mol/L TCEP per 1 ml of LRT.

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Name: 0.5mol/L TCEP Solution
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