A&A BIOTECHNOLOGY
innovating life science

Manual

Viral DNA/RNA

Kit for the isolation of viral DNA and RNA from blood samples, swabs, saliva and respiratory aspirates.

catalog #	size
034-50	50 isolations
034-100	100 isolations
034-200	200 isolations

For research use only.

Guarantee
A&A Biotechnology provides a guarantee on this product.
The company does not guarantee the correct performance of this kit in the event of:

- not adhering to the supplied protocol
- use of not recommended equipment or materials
- use of other reagents than recommended or which are not a component of the product
- use of expired or improperly stored product or its components

Note. For RNA isolation for coronavirus diagnostics,
we also recommend the specialized **CoV RNA** kit, cat # 034C-50, 034C-200.

Table of Contents

Specification

form	minicolumn
binding capacity	10 µg of DNA / 50 µg of RNA
sample size	• up to 350 µl of blood • swab • 100 µl of saliva or respiratory aspirate
elution volume	from 30 µl
elution solution	ultrapure water

Contents

component	50 isolations	100 isolations	200 isolations	storage
Minicolumns	50 pcs	100 pcs	200 pcs	15-25 °C
2 ml tubes	100 pcs	200 pcs	400 pcs	15-25 °C
A1 wash solution	100 ml	200 ml	400 ml	15-25 °C
R9F solution	35 ml	70 ml	130 ml	15-25 °C
Isopropanol	15 ml	30 ml	60 ml	15-25 °C
Ultrapure water	8 ml	8 ml	15 ml	-20–25 °C

Additional equipment and reagents

Necessary

- 1.5 ml sterile Eppendorf tubes
- Vortex

Optional

- Microcentrifuge
- 2 ml sterile Eppendorf tubes

Important notes

When working with RNA, use RNAse-free consumables. Work sterile, use disposable gloves and change them whenever good laboratory practice requires it.

Material preparation

Blood

1. Transfer up to **350 µl** of blood to a 1.5 ml Eppendorf tube (not included).
2. Centrifuge for **2 min** at **14 000 RPM**.
3. Transfer **100 µl** of **supernatant** to **a new 1.5 ml** Eppendorf tube (not included).
4. Add **400 µl** of **R9F** solution.
5. Vortex for **10 s**.
6. Keep for **5 min** at **room temp.**
7. Follow point 1. of the isolation protocol.

Swabs without transport medium

1. Cut off a portion of the swab with the sample and place it in a 2 ml Eppendorf tube (not included).

   Note. Part of the swab with the sample should completely fit in the tube.

2. Add **600 µl** of **R9F** solution.

   Note. Part of the swab with the sample should be completely immersed in the buffer.

3. Vortex for **10 s**.
4. Keep for **10 min** at **room temp.** Vortex from time to time during incubation.
5. Transfer **500 µl** of sample to **a new 1.5 ml** Eppendorf tube (not included).
6. Follow point 1. of the isolation protocol.

Swabs with transport medium

1. Transfer **150 µl** of transport medium to a 1.5 ml Eppendorf tube (not included).
2. Add **600 µl** of **R9F** solution.
3. Vortex for **10 s**.
4. Keep for **10 min** at **room temp.**
5. Transfer **500 µl** of sample to **a new 1.5 m**l Eppendorf tube (not included).
6. Follow point 1. of the isolation protocol.

Saliva or respiratory aspirates

1. Transfer **100 µl** of saliva or respiratory aspirate to a 1.5 ml Eppendorf tube (not included).
2. Add **400 µl** of **R9F** solution.
3. Vortex for **10 s**.
4. Keep for **10 min** at **room temp.** Vortex several times during incubation.
5. Continue from point 1. of the Isolation protocol.

Isolation protocol

1. Add **250 µl** of **isopropanol**.
2. Close the tube and mix by inverting the tube from time to time.
3. Apply the sample onto the minicolumn.
4. Centrifuge for **1 min** at **14 000 RPM**.
5. Transfer the minicolumn to **a new 2 m**l tube (included).
6. Add **700 µl** of **A1** wash buffer.
7. Centrifuge for **1 min** at **14 000 RPM**.
8. Transfer the minicolumn to **a new 2 ml** tube (included).
9. Add **700 µl** of **A1** wash buffer.
10. Centrifuge for **1 min** at **14 000 RPM**.
11. Discard the filtrate. Transfer the minicolumns to **the same** tube.
12. Add **300 µl** of **A1** wash buffer.
13. Centrifuge for **2 min** at **14 000 RPM**.

14. Transfer the minicolumn to **a sterile 1.5 ml** Eppendorf tube (not included).

15. Add **30-60 µl** of **ultrapure water** directly onto the minicolumn resin.

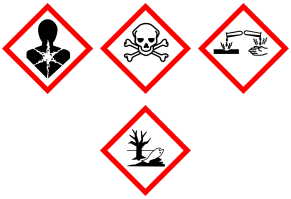
    Note. The smaller the water volume, the less efficient elution, but the RNA concentration in the eluate can be higher.

16. Keep the sample for **3 min** at **room temp.**

17. Centrifuge for **1 min** at **14 000 RPM**.

18. Remove the minicolumn. Store the purified DNA and RNA at **-20 °C** until later use.

Safety information



DANGER

R9F solution

H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.
H314 Causes severe skin burns and eye damage.
H341 Suspected of causing genetic defects.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long-lasting effects.
P261 Avoid breathing dust.
P273 Avoid release to the environment.
P280 Wear protective gloves, protective clothing, eye protection, face protection.
P301+P310 If swallowed: immediately call a Poison Center or doctor/physician.
P305+P351+P338 If in eyes: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a Poison Center or doctor/physician.

DANGER

Isopropanol

H225 Highly flammable liquid and vapor.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
P210 Keep away from heat, sparks, open flames, hot surfaces. No smoking.
P261 Avoid breathing vapors.
P305+P351+P338 If in eyes: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

DANGER

A1 wash solution

H225 Highly flammable liquid and vapor.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
P210 Keep away from heat, sparks, open flames, hot surfaces. No smoking.
P261 Avoid breathing vapors.
P305+P351+P338 If in eyes: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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