

COVID-19 / RSV / Influenza A&B Antigen Test Kit Instruction for Use

INTENDED USE

The COVID-19/RSV/Influenza A&B Antigen Test Kit is a lateral flow immunoassay for the qualitative detection of SARS-CoV-2, respiratory syncytial, influenza A and influenza B viral nucleoprotein antigens in nasal swabs from subjects. The symptoms of respiratory viral infection due to SARS-CoV-2, respiratory syncytial, influenza can be similar. The test is intended as an aid in diagnosis of symptomatic individual meeting respiratory infection for SARS-CoV-2 (within the first 7 days of the onset of symptoms) and influenza A/B or Respiratory syncytial virus (RSV) (within the first 4 days of the onset of symptoms). This kit is intended for layperson's home use in a non-laboratory environment. Test results of this kit are for clinical reference only. It is recommended that a comprehensive analysis of the disease be conducted based on clinical manifestations of patients and other laboratory tests.

PRINCIPLE

The COVID-19/RSV/Influenza A&B Antigen Test Kit is a lateral flow immunoassay based on the principle of the double antibody sandwich technique. A monoclonal SARS-CoV-2/RSV/Influenza A&B antibody conjugated with colored microparticles and sprayed onto the conjugation pad is used as a detector. During the test, the SARS-CoV-2/RSV/Influenza A&B antigen in the sample interacts with the SARS-CoV-2/RSV/Influenza A&B antibody conjugated with colored microparticles, creating an antigen-antibody labeled complex. This complex migrates on the membrane by capillary action up to the Test line where it is captured by the pre-coated monoclonal SARS-CoV-2/RSV/Influenza A&B antibodies. A colored test line (T) would be visible in the each result window if SARS-CoV-2/RSV/Influenza A&B antigens are present in the sample. The absence of the T line indicates a negative result. The control line (C) is for procedural control and should appear whenever the test procedure is being performed properly.

PRECAUTIONS

- For in vitro diagnostic use only.
- Do not use after the expiration date.
- Perform the test at room temperature 15 to 30°C.
- The test cassette should remain in the sealed pouch until use.
- Please read all information in this leaflet before performing the test.
- Components from difference lots must not be mixed or used together.
- Positive result cannot necessarily determine whether a person is infectious.

STORAGE AND STABILITY

Store the test kit in the original packaging at 2°C - 30°C. Do not freeze. Test kit contents remain stable until the expiration date printed on the outer packaging.
After opening the pouch, the test should be used within one hour. Prolonged contact with hot and humid environment will cause the product to deteriorate.

LIMITATION

- A negative result does not rule out infection with another type of respiratory virus. And a positive result cannot necessarily determine whether a person is infectious.
- The test can only be used once.
- Test can only be performed by person over 15 years age. Any persons or children under 15 years will require adult supervision or assistance. Not to be performed on children under 2 years of age.
- The performance of COVID-19/RSV/Influenza A&B Antigen Test Kit was established based on the evaluation of a limited number of clinical specimens. Clinical performance has not been established with all circulating variants but is anticipated to be reflective of the prevalent variants in circulation at the time and location of the clinical evaluation. Performance at the time of testing may vary depending on the variants circulating, including newly emerging strains of SARS-CoV-2 and their prevalence, which change over time.
- In particular, false negative results may occur if the testing is not performed within the first 7 days of the onset of COVID-19 or within the first 4 days of influenza A&B/RSV symptoms or if the antigen level in the sample is below the detection limit.
- The tests are less reliable in the later phase of infection and in asymptomatic individuals.
- Recommend repeat testing within 1-3 days if there is an ongoing suspicion of infection, being in a high risk setting or where there is an occupational risk or other requirement.
- Negative results may not mean that a person is not infectious and if symptoms persist, please seek medical advice.

SAFETY INFORMATION

- Wearing a mask can help protect you and those around you if you are in an area with community transmission and physical distancing is not possible.
- Follow the directions of your local state or territory government health department to protect yourself.
- Test kit solutions should only be used as directed; do not ingest; do not dip the swab into provided solution or other liquid before inserting the swab into the nose; avoid contact with skin and eyes; keep out of the reach of children and pets before and after use.
- If the extraction buffer comes in contact with the skin or eyes, flush with plenty of water. If irritation persists, seek medical advice from a doctor or your local medical center.

PERFORMANCE CHARACTERISTICS

For COVID-19

Using COVID-19/RSV/Influenza A&B Antigen Test Kit by professional was compared to the RT-PCR kit. A sensitivity of 95.45% (210/220 known confirmed Positives) and a specificity of 99.03% (307/310 known confirmed Negatives) were determined for the COVID-19/RSV/Influenza A&B Antigen Test Kit.

For influenza A test

Using COVID-19/RSV/Influenza A&B Antigen Test Kit by professional was compared to the RT-PCR kit. A sensitivity of 93.48% (86/92 known confirmed Positives) and a Specificity of 98.29% (288/293 known confirmed Negatives) were determined for the COVID-19/RSV/Influenza A&B Antigen Test Kit.

For influenza B test

Using COVID-19/RSV/Influenza A&B Antigen Test Kit by professional was compared to the RT-PCR kit. A sensitivity of 91.11% (82/90 known confirmed Positives) and a Specificity of 97.89% (278/284 known confirmed Negatives) were determined for the COVID-19/RSV/Influenza A&B Antigen Test Kit.

For RSV test

Using COVID-19/RSV/Influenza A&B Antigen Test Kit by professional was compared to the RT-PCR kit. A sensitivity of 94.81% (201/212 known confirmed Positives) and a Specificity of 98.87% (175/177 known confirmed Negatives) were determined for the COVID-19/RSV/Influenza A&B Antigen Test Kit.

Usability Study

Lay users in different age distribution, different education level and different gender participated in usability study conducted in the self-testing environment. Compared to RT-PCR, the clinical performance of COVID-19/RSV/Influenza A&B Antigen Test Kit in hands of lay persons showed a sensitivity of 94.87% (N=39) and a specificity of 98.57% (N=70) for COVID-19 antigen, a sensitivity of 94.29% (N=35) and a specificity of 98.57% (N=70) for RSV antigen, a sensitivity of 90.00% (N=30) and a specificity of 98.57% (N=70) for influenza A antigen and a sensitivity of 93.33% (N=30) and a specificity of 98.57% (N=70) for influenza B antigen.

LIMIT OF DETECTION (ANALYTICAL SENSITIVITY)

Virus Lines	LoD Titer
SARS-CoV-2 wild type	1.0×10 ² TCID ₅₀ /mL
Flu A H1N1/Wisconsin/588/2019	2.08×10 ² TCID ₅₀ /mL
Flu A H3N2/SouthAustralia/34/2019	7.76×10 ² TCID ₅₀ /mL
Flu B Austria/1359417/2021 (Victoria lineage)	2.84×10 ² TCID ₅₀ /mL
Flu B Phuket/3073/2013 (Yamagata lineage)	1.08×10 ⁴ TCID ₅₀ /mL
Flu A H1N1/Beijing/262/95	3.105×10 ² TCID ₅₀ /mL
Flu A H3N2/Shangdong/9/93	2.26×10 ² TCID ₅₀ /mL
Flu B Victoria lineage/Shandong/7/97	1.825×10 ² TCID ₅₀ /mL
Flu B Yamagata lineage/Jiangsu/10/03	2.44×10 ² TCID ₅₀ /mL
RSV type A (A2)	2.75×10 ² PFU/mL
RSV type B (B WV-14617-85)	2.8×10 ² TCID ₅₀ /mL

FREQUENTLY ASKED QUESTIONS

1. Will other diseases affect the result?

The potential cross-reactivity of the following pathogens was evaluated with SARS-CoV-2, Influenza A and B negative and positive samples using the COVID-19/RSV/Influenza A&B Antigen Test Kit. No cross-reactivity results was observed.

Virus or organisms		
SARS-CoV	Influenza A H5N1 virus	Coxsackie virus CA16e
Human coronavirus NL63	Influenza B Yamagata	Coxsackie virus B5
Human coronavirus HKU1	Influenza B Victoria	Coxsackie virus A24
Human coronavirus OC43	Haemophilus influenzae	Candida albicans
Human coronavirus 229E	Adenovirus 1	Human Metapneumovirus A2
MERS	Adenovirus 2	Legionella pneumophila
Respiratory syncytial virus Type A	Adenovirus 3	Mycobacterium tuberculosis
Respiratory syncytial virus Type B	Adenovirus 4	Mycoplasma pneumoniae
Parainfluenza virus 1	Adenovirus 5	Pneumocystis jirovecii
Parainfluenza virus 2	Adenovirus 7	Streptococcus pneumoniae
Parainfluenza virus 3	Adenovirus 55	Staphylococcus aureus
Parainfluenza virus 4	Enterovirus EV70	Rhinovirus A2
Seasonal influenza A H1N1 virus	Bordetella pertussis	Rhinovirus B52
Influenza A H3N2 virus	Chlamydia pneumoniae	Streptococcus pyogenes

2. Does these substances interfere with the test?

The following substances were spiked into samples and tested with the COVID-19/RSV/Influenza A&B Antigen Test Kit. No interference results was observed.

Substances		
Mucin	Phenylephrine Hydrochloride	Histamine hydrochloride
Human blood (EDTA anticoagulated)	Artidol	Alpha interferon
Bedomethasone dipropionate nasal aerosol	Zanamivir	Azithromycin
physiological seawater nasal spray	Ribavirin	Oselتامvir phosphate
Triamcinolone acetonide nasal spray	Peramivir	Meropenem
Mometasone furoate nasal spray	Lopinavir	Tobramycin
Fluticasone propionate nasal spray	Ritonavir	Hexadecadrol
Budesonide nasal spray	Levofloxacin	Flunisolide
Oxymetazoline hydrochloride spray	Ceftriaxone	

3. Will this test hurt?

No, the nasal swab is not sharp and it should not hurt. Sometimes the swab can feel slightly uncomfortable or tickly. If you feel pain, please stop the test and seek advice from a healthcare provider.

4. I have a nosebleed after swabbing my nose. What should I do?

In the unlikely event your nose starts bleeding, apply pressure to your nose until the bleeding stops and consult a healthcare professional. Do not insert the Swab again.

5. Can the test detect various variants of COVID-19?

Yes, the following SARS-CoV-2 variants can be detected with the COVID-19 (SARS-CoV-2) Antigen Test Kit: Alpha, Beta, Gamma, Delta and Omicron.

6. Which strains of influenza the test covers?

Influenza A		
A/Vietnam/HN31242/2007	A/Victoria/2570/2019	A/Brisbane/02/2018
A/Shanghai/2/2013	A/Switzerland/8060/2017	A/Michigan/45/2015
A/RRR/8/34	A/Hong Kong/45/2019	A/Hong Kong/2671/2019
A/California/04/2009	A/Wisconsin/588/2019	
A/Darwin/9/2021	A/Darwin/6/2021	
A/SouthAustralia/34/2019	A/Bean Goose/Hubei/chenhu/XV135-1/2016	
A/Guizhou/54/89	A/Singapore/INFHM-16-0019/2016	

Influenza B		
B/Sichuan/Gaoxin/531/2018	B/Austria/1359417/2021	B/Brisbane/60/200
B/Hong Kong/3417/2014	B/Washington/02/2019	
B/Phuket/3073/2013	B/Colorado/06/2017	

7. Which strains of RSV the test covers?

RSV Type A/A2	RSV Type B/GZ/1704-8	RSV Type B/B WV-14617-85
RSV Type A/Long	RSV Type B/18537	

8. What to do if you test positive?

Anyone diagnosed with COVID-19 can pass the virus onto others.

While isolation is no longer a legal requirement, if you test positive for COVID-19, staying at home protects the people in your community.

If you test positive, you should not visit high-risk settings like hospitals and aged and disability care settings:

- for at least 7 days or until symptoms have gone
- unless seeking immediate medical care.

To help protect those around you, we recommend:

- avoiding contact with people who are at higher risk of severe disease
- wearing a mask outside the home
- working from home where possible
- avoiding going to school, public areas, or travel on public transport, in taxis or ride-share services
- practicing good hygiene
- following your local health department's advice when leaving home.

If you have any appointments you cannot miss (visit to a doctor, family violence service or police), let them know in advance that you have COVID-19.

If you feel unwell or need COVID-19 advice for someone in your care, talk with your health provider, or speak to a nurse by calling the healthdirect helpline on 1800 022 222.

If you develop symptoms such as severe shortness of breath or chest pain, call triple zero (000) immediately. Tell the call handler and the paramedics on arrival if you have COVID-19.

MEDICAL DEVICE INCIDENT REPORT

You can contact the Therapeutic Goods Administration (TGA) to report poor performance or usability issues via the online Users Medical Device Incident Report, emailing iris@tga.gov.au or calling 1800 809 361 (08:30am to 5:00pm Monday to Friday).

SYMBOLS

	Do not re-use		Use-by date
	In vitro diagnostic medical device		Keep away from sunlight
	Store between 2-30°C		Keep dry
	Consult instructions for use		Do not use if package is damaged and consult instructions for use
	Batch code		Manufacturer
	Contains sufficient for <n> tests		Catalogue number

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Australia Sponsor
BIOTOP Pty Ltd
Unit 722368 Sussex St Sydney NSW

Customer Support Line: 02 7908 9566
Customer Service hours: 9 AM ~ 8 PM, 7 Days. ~ UTC+10

E-mail: info@biotop6.com
Website: www.biotop6.com

Note: Use test only one time.

- Wash your hands.
- Tear the aluminum foil on the extraction buffer tube. Place extraction tube into box tube stand.
- Open the swab package and take out the swab. **Note: Do not touch the swab tip with finger.**
- Tilt your head back slightly. Insert the swab about 1.5 to 2.5 cm into one nostril. Gently rotate the swab at least five times against the nasal wall.
- Insert the same swab about 1.5 to 2.5 cm into the second nostril. Again, gently rotate the swab at least five times against the nasal wall.
- Place the swab in the extraction tube and rotate the swab against the walls of the tube 5 times. Allow the swab to stand in the extraction buffer tube for 1 minute.
- Remove the swab while squeezing the sides of the tube to extract the liquid from the swab.
- Press the nozzle cap tightly onto the tube.
- Open the foil pouch and take out the test device.
- 3 drops must be added to the three specimen wells.
- Read the result at 15 minutes. Do not interpret the result after 20 minutes.
- Place the used test components into a biohazard specimen bag which can be sealed and dispose of in general waste.
- Wash your hands thoroughly after test completion.

Scan the QR code or visit our website for instructional video, product information and IFU:
<https://www.biop06.com/diaghome-covid-19rsvinfluenza-ab-antigen-test-kit-product/>

Components	1 Test/Kit	5 Tests/Kit	20 Tests/Kit	25 Tests/Kit
1. Test Cassette	1 x	5 x	20 x	25 x
2. Extraction Buffer Tube	1 x	5 x	20 x	25 x
3. Disposable Swab	1 x	5 x	20 x	25 x
4. Biohazard Specimen Bag	1 x	5 x	20 x	25 x
5. Instruction for Use	1 x	1 x	20 x	25 x

Materials required but not provided : Timer 20 independent 1 test/kit

For the sterilized swab
 CE 0197 MDR 2017/745 EU Hangzhou Yiguoren Biotechnology Co., Ltd.
 CE 0197 MDD 95/42/EEC Jianguo HanHeng Medical Technology Co., Ltd.
 CE 0197 MDD 95/42/EEC Jianguo Changfeng Medical Industry Co., Ltd.

COVID-19
 Positive: Two colored lines appear on the membrane. One line appears in the control region (C) and the other line appears in the test region (T).
 Negative: Only one colored line appears in the control region (C). No colored line appears in the test region (T).
 Invalid: Control line fails to appear.

RSV
 Positive: Two colored lines appear on the membrane. One line appears in the control region (C) and the other line appears in the test region (T).
 Negative: Only one colored line appears in the control region (C). No colored line appears in the test region (T).
 Invalid: Control line fails to appear.

Influenza A&B
 Positive: Two red lines appear. One red line should be in the control line region (C), and the other one appears in the A test line region (A) or B test line region (B).
 Negative: One red line appears in the control line region (C). No red line appears in the influenza A and B test region (T).
 Invalid: Control line fails to appear.

COVID-19 POSITIVE: Two colored lines appear on the membrane. One line appears in the control region (C) and the other line appears in the test region (T).
COVID-19 NEGATIVE: Only one colored line appears in the control region (C). No colored line appears in the test region (T).
COVID-19 INVALID: Control line fails to appear.

RSV POSITIVE: Two colored lines appear on the membrane. One line appears in the control region (C) and the other line appears in the test region (T).
RSV NEGATIVE: Only one colored line appears in the control region (C). No colored line appears in the test region (T).
RSV INVALID: Control line fails to appear.

Influenza A POSITIVE: It is positive for Influenza A antigen if two Red lines appear. One red line should be in the control line region (C), and the other one appears in the A test line region.
Influenza B POSITIVE: It is positive for Influenza B antigen if two Red lines appear. One red line should be in the control line region (C), and the other one appears in the B test line region.
Influenza A and B POSITIVE: It is positive for both the antigens of Influenza A and Influenza B if three red lines appear. One Red line should be in the control line region (C), and another two should appear in A test line region and B test line region.
NEGATIVE: One Red line appears in the control region (C). No red line appears in the influenza A and B test region (T).
INVALID: Control line fails to appear.

Caution
 For positive COVID-19 results: If you test positive, follow current Department of Health advice(Refer to FAQ #8).
 For positive Influenza A/B or RSV results: If you have a positive result, please consult a medical practitioner for follow up clinical care.
 For negative results: A negative result does not mean you are not infected with SARS-CoV-2, Influenza A/B, and/or RSV. If you are unwell, please consult a medical practitioner for follow up care and continue to follow all public health advice on limiting the spread of COVID-19, Influenza, and RSV. If symptoms persist it is recommended testing be repeated within 1 - 3 days.
 For invalid results: Please repeat testing using a freshly collected sample and new test cassette. Report repeated invalid results to the sponsor.

Customer Support help line: 02 7908 9566
Customer Service hours: 9 AM ~ 8 PM, 7 Days. ~ UTC+10

COVID-19 Positive, RSV Negative, Influenza A Negative
 COVID-19 Positive, RSV Positive, Influenza A Negative
 COVID-19 Positive, RSV Negative, Influenza A Positive
 COVID-19 Positive, RSV Positive, Influenza B Positive
 COVID-19 Positive, RSV Positive, Influenza A Negative
 COVID-19 Positive, RSV Negative, Influenza B Negative
 COVID-19 Positive, RSV Negative, Influenza A Positive
 COVID-19 Positive, RSV Negative, Influenza B Positive
 COVID-19 Positive, RSV Positive, Influenza A Negative
 COVID-19 Positive, RSV Positive, Influenza B Negative
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