

INTENDED USE

The Proflow™ RSV-Adenovirus Respiratory test is a single use rapid membrane immunoassay for the qualitative detection of RSV and adenovirus antigens in human nasopharyngeal samples to aid in the diagnosis of RSV and adenovirus respiratory infection. For *In Vitro* Diagnostic Use.

SUMMARY AND EXPLANATION

Although a wide variety of viral agents are capable of causing lower respiratory tract infections in children and adults, influenza A & B; respiratory syncytial virus (RSV); parainfluenza viruses 1, 2, and 3; and adenovirus, are the most common. Of these, influenza A & B and RSV are the most significant causes of medically attended acute respiratory illness. In addition to sharing a similar seasonal prevalence, it is important to remain aware that influenza A & B and RSV share overlapping clinical features and infection potential for certain high-risk patient groups. Symptoms of respiratory illness caused by adenovirus infection range from the common cold syndrome to pneumonia and bronchitis.

PRINCIPLE OF THE TEST

The Proflow™ RSV-Adenovirus Respiratory test is a single use rapid membrane immunoassay for the qualitative detection of RSV and adenovirus respiratory antigen in human nasopharyngeal samples.

Monoclonal antibodies to RSV and adenovirus respiratory antigens are coated onto the test line region of the strip. During testing the sample migrates along the membrane by capillary action and is allowed to react with the conjugate on the test strip. In the case of a positive result the specific antibodies present on the membrane will capture the coloured conjugate. A green line should always appear in the control line region to show that sufficient volume was added, proper flow was obtained and the reagents functioned correctly. Failure of the control line to appear, whether or not test lines are present, indicates an invalid assay.

The test is interpreted by the presence or absence of visibly detectable coloured lines in the test region at 10 minutes or less depending on the concentration of antigen present. A positive RSV result will show a pink/red test line and a green control line, indicating that RSV antigen is present in the sample. A positive respiratory adenovirus result will show a pink/red test line and a green control line, indicating that respiratory adenovirus antigen is present in the sample. A negative test result, read at 10 minutes, will show only a green control line, indicating that RSV and respiratory adenovirus antigens were not detectable in the sample.

MATERIALS PROVIDED

- PL.3125 Proflow™ RSV-Adenovirus Respiratory Test Devices: 20 devices
- PL.3225 Proflow™ Diluent
- PL.3325 Proflow™ RSV Positive Control Swab
- PL.3425 Proflow™ Adenovirus Positive Control Swab
- Proflow™ test tubes: 20
- Plastic pipette: 20
- Proflow™ swabs: 20
- Package insert

MATERIALS REQUIRED BUT NOT PROVIDED

- Sample collection container
- Timer or stopwatch
- Biohazard disposal container
- Disposable gloves

STABILITY AND STORAGE

- Store all components at 2-30°C.
- Do not freeze or overheat.
- Do not use beyond the expiration date printed on the outer package label.
- The test kits should be kept away from direct sunlight, moisture and heat.

PRECAUTIONS

- For *In Vitro* Diagnostic Use only.
- For professional use only. Directions should be read and followed carefully.
- Tests are for single use only. Do not reuse.
- Reagents are provided at the necessary working strength. Do not dilute reagents.
- Do not interchange reagents between kits with different lot numbers.
- Do not use kits or reagents beyond the stated expiration dates.
- Microbial contamination of reagents may decrease the accuracy of the assay.
- Treat all materials as if they were infectious and dispose of all material in accordance with local regulation.

SAMPLE STORAGE AND COLLECTION

NASOPHARYNGEAL SWAB METHOD

- Bend shaft to follow curve of nasopharynx.
- Insert swab through nostril to posterior nasopharynx.
- Rotate swab a few times to obtain infected cells.
- For an optimal sample, repeat procedure using other nostril.

NASOPHARYNGEAL ASPIRATE METHOD

- Add several drops of saline solution into each nostril.
- Place catheter through nostril into posterior nasopharynx.
- Apply gentle suction. Using rotating motion, slowly withdraw catheter.
- For an optimal sample, repeat procedure using other nostril.

Test sample as soon as possible. Allow the tests, samples and diluent to reach room temperature 15-30°C prior to testing. Cool sample to 2-8°C during storage and transport for 8 hours prior to testing.

TEST PROCEDURE

NASOPHARYNGEAL SWAB METHOD (SAMPLES AND CONTROLS)

1. Remove the test from its pack just before use. Place the test on a clean flat surface.
2. Label each test with appropriate patient information.
3. Use a separate pipette and test for each sample or control.
4. Put the swab into the test tube.
5. Add 15 drops (or 500uL) of diluent and agitate to remove cells from swab.
6. Dispense 3 drops (or 100uL) of the sample mix into the circular window.
7. Read the result at 10 minutes. Do not read the results after 10 minutes as they may be inaccurate.

NASOPHARYNGEAL ASPIRATE METHOD

1. Remove the test from its pack just before use. Place the test on a clean flat surface.
2. Label each test with appropriate patient information.
3. Use a separate pipette and test for each sample or control.
4. Add 6 drops (or 200uL) of nasopharyngeal wash or aspirate sample into a test tube.
5. Add 9 drops (or 300uL) of diluent and vortex for 1 minute.
6. Dispense 3 drops (or 100uL) of the sample mix into the circular window.
7. Read the result at 10 minutes. Do not read the results after 10 minutes as they may be inaccurate.

QUALITY CONTROL PROCEDURE

It is recommended that a positive and negative control be used to ensure that the test is performing as expected.

The control line (C) is a procedural control and will show that the test has been performed correctly; proper flow occurred and that the test reagents functioned as expected. When a green line appears at the control line position this indicates the test has been performed correctly. The control line will appear on all valid tests, whether or not the sample is reactive or non-reactive (refer to the Interpretation of Results section).

INTERPRETATION OF RESULTS

Positive RSV

One pink/red line of any intensity will appear at the test line; a green line will appear at the control line. This indicates a reactive result that is interpreted as positive for RSV antigen.

Positive Adenovirus

One pink/red line of any intensity will appear at the test line; a green line will appear at the control line. This indicates a reactive result that is interpreted as positive for adenovirus antigen.

Positive RSV-Adenovirus

Two pink/red lines of any intensity will appear at the test line positions; a green line will appear at the control line. This indicates a reactive result that is interpreted as positive for both RSV and adenovirus antigens.

Negative

A single green line of any intensity appears in the test window at the control line position. There are no lines at the test line positions. This indicates a non-reactive result that is interpreted as negative for both RSV and adenovirus antigens.

Positive RSV



Test line 1
Control line
Test line 2

Positive Adenovirus Respiratory



Positive RSV and Adenovirus Respiratory



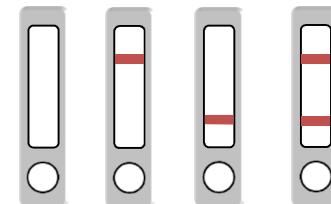
Test line 1
Control line
Test line 2

Negative RSV and Adenovirus Respiratory



Invalid

No line appears in the test window at the control line position. This is an invalid result and cannot be interpreted. This is irrespective of whether or not a coloured line appears in the test window at the test line positions. If any of the conditions below occurs, the test should be repeated with a new test.



Test line 1
Control line
Test line 2



LIMITATIONS OF THE PROCEDURE

- The Proflow™ RSV-Adenovirus Respiratory test will only indicate the presence of RSV and/or adenovirus in the sample (qualitative detection) and should be used for the detection of RSV and/or adenovirus antigens in nasopharyngeal samples only (swab, aspirate or wash). Neither the quantitative value nor the rate of increase in antigen concentration can be determined by this test.
- The test must be carried out within 2 hours of opening the sealed bag.
- If the test result is negative and clinical symptoms persist, additional testing using other clinical methods is recommended. A negative result does not at any time preclude the possibility of RSV or adenovirus infection.
- This test provides a presumptive diagnosis of RSV and adenovirus respiratory infections. All results must be interpreted together with other clinical information and laboratory findings available to the clinician.

PERFORMANCE CHARACTERISTICS**EXPECTED VALUES**

RSV is generally considered the most frequent cause of pneumonia, bronchiolitis, and tracheobronchitis among infants and young children. It is now known to be the etiologic cause in 14-27% of cases of pneumonia in the elderly during the winter season.

Everyone can be at risk of adenovirus infection, but generally, patients with weak immune systems or with underlying respiratory or cardiac disease are most at risk for severe complications from any respiratory infection, including adenovirus.

SENSITIVITY AND SPECIFICITY

An evaluation was conducted comparing results obtained using the Proflow™ RSV-Adenovirus test against other commercial tests. Different virus extract dilutions were tested directly in the sample diluent or spiked in a negative nasal specimen in accordance with kit instructions. The Proflow™ RSV-Adenovirus Respiratory test showed:

Specificity >99% for RSV
>99% for Adenovirus
Sensitivity >95% for RSV
>99% for Adenovirus.










CROSS-REACTIVITY

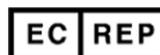
An evaluation was performed to determine the cross-reactivity of the Proflow™ RSV-Adenovirus Respiratory test. There was no cross reactivity with common respiratory pathogens, other organisms and substances occasionally present in nasopharyngeal samples:

- Influenza type A
- Influenza type B

REFERENCES

- Barenfanger et al. Clinical and Financial Benefits of Rapid Detection of Respiratory Viruses: an Outcomes Study. *Journal of Clinical Microbiology*. August 2000; Vol 38 No 8: pp2824-2828.

	= Use by
	= Lot number
	= Catalogue number
	= Manufacturer
	= Authorized Representative in the European Community
	= Contains sufficient for <n> tests
	= In vitro diagnostic medical device
	= Temperature limitation
	= Consult instructions for use



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