
Lab Dept: Microbiology/Virology

Test Name: HUMAN METAPNEUMOVIRUS PCR

General Information

Lab Order Codes: HMPV

Synonyms: hMPV PCR; Metapneumovirus PCR; Respiratory viruses, human Metapneumovirus (hMPV) PCR only

CPT Codes: 87798 – Amplified probe technique, each organism

Test Includes: Detection of human metapneumovirus in patients exhibiting symptoms of acute upper and /or lower respiratory tract infections by RT-PCR (Reverse Transcription Polymerase Chain Reaction).

Logistics

Lab Testing Sections: Sendout Outs – Microbiology/Virology

Phone Number: MIN Lab: 612-813-5866

STP Lab: 651-220-6655

Referred to: Mayo Medical Laboratories (FHMPV) and forwarded to Focus Diagnostics (49200)

Test Availability: Specimens accepted daily, 24 hours

Turnaround Time: 1 – 2 days

Special Instructions: Requisition must state **specific site** of specimen and **date/time of collection**.

Specimen

Specimen Type: Bronchoalveolar lavage (BAL) specimens; nasopharyngeal aspirates; NP swabs (V-C-M medium green cap or equivalent UTM) in 3 mL M4 media.

Container: Sterile screw cap container; swab transport media; viral transport media

Volume: 0.7 mL nasal aspirates or BAL; NP swabs

Collection:**Nasal Aspiration**

1. Prepare suction set up on low to medium suction.
2. Wash hands.
3. Put on protective barriers (e.g., gloves, gown, mask).
4. Place child supine and obtain assistant to hold child during procedure.
5. Attach luki tube to suction tubing and #6 French suction catheter.
6. Insert catheter into nostril and pharynx without applying suction.
7. Apply suction as catheter is withdrawn.
8. If necessary, suction 0.5 – 1 mL of normal saline through catheter in order to clear the catheter and increase the amount of specimen in the luki tube.
9. Carefully transfer specimen to a screw cap container.

If specimen cannot be transported to the laboratory immediately, place 1 -2 mL (Minimum 0.3 mL) of specimen in viral transport media (VTM) and refrigerate.

NP swab

1. Carefully insert a flexible-shaft dacron swab containing a dry tip into the nasopharyngeal cavity until resistance is encountered.
2. Rotate the swab slowly on the nasopharyngeal membrane for 5 – 10 seconds to absorb secretions.
3. Remove the swab, place in swab transport medium and send to the lab immediately.

If specimen cannot be transported to the laboratory immediately, cut swabs into viral transport media (VTM) and refrigerate.

Bronchoscopy

1. Specimen obtained by physician through the biopsy channel of the bronchoscope.
2. Transfer 1 – 2 mL (Minimum: 0.3 mL) of sample into a luki tube or sterile container.

Special Processing:

Lab Staff: Place specimen into viral transport media (VTM) upon arrival in laboratory.

Transport/Storage:

Transport to the Laboratory immediately to maintain specimen integrity. Specimens can be stored at refrigerated temperature (2 – 8° C) for up to 7 days before processing.

Sample Rejection:

Specimen with a transit time exceeding 1 hour after collection without refrigeration; calcium alginate, wooden or dry swabs; improperly labeled specimen; insufficient volume; leaking or non-sterile containers. Specimens other than NP swab, NP aspirate or BAL.

If an unacceptable specimen is received, the patient's caregiver will be notified and another specimen will be requested before the specimen is discarded

Interpretive

Reference Range: None Detected

Critical Values: N/A

Limitations:

- Blood, excessive nasal secretions/mucus, decongestants and substances used to relieve nasal dryness or irritation may inhibit PCR and give unresolved results.
- There is a risk of false negative results if specimens are improperly collected, transported or stored
- Low levels of virus shedding may yield a false negative result.

Methodology: Reverse Transcription Polymerase Chain Reaction (RT - PCR)

References: Pro hMPV+ Instructions for Use, 504367 Rev. 001, Hologic, Incl, 10210 Genetic Center Drive, San Diego, CA 92121 USA

Miller, J. Michael (1999) A Guide To Specimen Management in Clinical Microbiology, American Society for Microbiology, Washington, D.C, pg 100

Baron, EJ and RB Thompson Jr, Specimen Collection, Transport, and Processing: Bacteriology In J. Versalovic, et al, (ed) Manual of Clinical Microbiology, 11th edition, American Society for Microbiology, Washington DC, pg 237

[Mayo Medical Laboratory Website](#) March 2016

[Focus Diagnostics Website](#) March 2016

Updates: 3/28/16: Testing previously performed internally at Children's. Now forwarded to Mayo/Focus.