

**Test Menu**

| TOPIC   | DESCRIPTION  |
|---|--|
| <b>Test Name</b>  | HIV-1 Genotyping (drug resistance testing)   |
| <b>Other Name (s)</b>   | HIV-1 Targeted Next Generation Sequencing  |
| <b>Analyte(s)</b>   | HIV-1  |
| <b>Test Code</b>  | 0570   |
| <b>Lab location</b>   | Jacksonville location  |
| <b>Department</b>   | Retrovirology (HIV)  |
| <b>Prior Authorization</b>                                    | A documented HIV-1 viral load of at least 2,000 RNA copies within 30 days of the genotype blood draw must be provided or an HIV-1 viral load will be performed by BPHL prior to Genotyping.  |
| <b>Required Forms</b>   | none   |
| <b>Specimen Sources</b>                                       | Plasma   |
| <b>Supplemental Information- Special Specimen Preparation</b> | Centrifuge PPT within 8 hours of collection, see "Storage Conditions". Shipment must be sent priority overnight.   |
| <b>Minimum Volume</b>   | At least 2.5ml plasma  |
| <b>Storage Conditions</b>                                     | <p>- HIV-1 Genotype with Viral load maintain <b>&lt;20°C until shipment</b></p> <p>- HIV-1 Genotype only maintain <b>2-8°C until shipment</b></p>  |
| <b>Collection Media</b>                                       | PPT (pearl top)  |
| <b>Specimen Labeling</b>                                      | Specimen must be labeled with <b>at least two unique patient identifiers</b> (first and last name, unique ID# or DOB) and the date of collection. Electronic lab order preferred, HMS, etc.<br><b>Information on the specimen must match the requisition.</b>  |
| <b>Packaging and Shipping Instructions and Handling</b>       | <p><u>Genotype and Viral load request</u> - Send plasma on dry ice <b>≤-20°C</b>, however if dry ice is not available, specimens may be sent on 3 - 4 foam refrigerant packs in a Styrofoam cooler at <b>2-8°C</b>. Please label cooler on the outside with "Genotyping". Do not allow specimens to thaw before shipping. Shipment must be sent priority overnight.</p> <p><u>Genotype only request</u> - Send plasma on 3 - 4 foam refrigerant packs in a Styrofoam cooler at <b>2-8°C</b>. Please label cooler on the outside with "Genotyping". Shipment must be sent priority overnight.</p> |
| <b>Test Methodology</b>                                       | Targeted Next Generation Sequencing  |
| <b>Turnaround Time</b>  | 7-10 days  |
| <b>Result Indicator</b>                                       | Current anti-retroviral drug resistance report (mutation report optional) or Invalid   |
| <b>Unsatisfactory Specimen</b>                                | <ol style="list-style-type: none"> <li>1) Initial testing indicates that the viral load is below the minimum requirement for further testing.</li> <li>2) Specimen not centrifuged.</li> <li>3) Wrong specimen tube received.</li> <li>4) Information on specimen does not match the requisition/test order</li> <li>5) Expired collection device was used for specimen collection</li> </ol>  |
| <b>Interferences and Limitations</b>                          | Hemolysis  |
| <b>Additional Information &amp; Notes</b>                     | HIV-1 viral load must be <b>&gt; 2,000 RNA copies/ml blood</b> .   |
| <b>Reference Range</b>  | HIV-1 RNA Not Detected   |
| <b>Reference Lab</b>  | 3 <sup>rd</sup> party clinical interpretation source   |
| <b>Reflex testing</b>   | none   |

**Mission:**

To protect, promote & improve the health of all people in Florida through integrated state, county & community efforts.



**Ron DeSantis**  
Governor

**Joseph A. Ladapo, M.D., Ph.D.**  
State Surgeon General

**Vision:** To be the Healthiest State in the Nation

## BUREAU OF PUBLIC HEALTH LABORATORIES JACKSONVILLE, FLORIDA

### Quick Reference Guide To HIV-1 Genotyping

The Department of Health, Bureau of Public Health Laboratories (BPHL) offers HIV-1 genotyping (antiretroviral drug resistance testing) using a Targeted-Next Generation Sequencing (T-NGS) methodology. Below is a guide for this service.

- ⇒ No preliminary restrictions such as fasting are required for a satisfactory plasma specimen.
- ⇒ Patient must have at least an HIV-1 viral load of 2,000 RNA copies/ml to attempt sequencing. Please provide the most recent viral load value and date performed with the HIV-1 test requisition. We will perform a viral load and bill accordingly if the provided last test date is >30 days or not provided.
- ⇒ Collect 5 ml blood in a sterile Plasma Preparation Tube (PPT), "pearl top", BD reference #362788. The assay requires a minimum of 2.5 ml plasma. **Do not refrigerate whole blood.** Alternatively, one may collect 7 ml blood in EDTA (K3, 0.15% soln.), "purple top".
- ⇒ Specimen must be labeled with **at least two unique patient identifiers** (first and last name, unique ID# or DOB) and the **date of collection**. Electronic lab order preferred, HMS, etc. **Information on the specimen must match the requisition.**
- ⇒ Centrifuge (10-15 minutes at 1000 x g) the PPT or purple top **within 8 hours of collection.**
  - If the BPHL is performing the HIV-1 viral load and HIV-1 genotyping please use the following.
    - 1) PPT is now ready to freeze until shipment is prepared (decanting plasma is not required). Purple tops will require decanting of plasma from cells, into a sterile screw-top plastic tube.
    - 2) Immediately place plasma in -20°C freezer.
    - 3) Send plasma on approx. 2-3 kg dry ice at ≤-20°C, if available, do not allow dry ice to contact specimens. If dry ice is not available, specimens may be sent on 3-4 frozen refrigerant packs in a Styrofoam cooler at 2-8°C. Please label cooler on the outside with **Genotyping**. Do not allow specimens to thaw before shipping.
  - If the BPHL is performing only HIV-1 genotyping please use the following.
    - 1) PPT is now ready to store at 2-8°C until shipment is prepared (decanting plasma is not required). Purple tops will require decanting of plasma from cells, into a **sterile screw-top plastic tube**.
    - 2) Immediately place plasma in a 2-8°C refrigerator.
    - 3) Send plasma on 3-4 frozen refrigerant packs in a Styrofoam cooler at 2-8°C. Please label cooler on the outside with **Genotyping**.
- ⇒ Ship plasma, **prepaid priority overnight**, frozen or on cold packs to the BPHL-Jacksonville on **Monday thru Friday only**. If the work week includes a holiday, please call the laboratory for collection and shipping instructions.
- ⇒ Follow appropriate packaging and transporting guidelines. Do not transport dry ice in an air-tight container.
- ⇒ HIV-1 genotyping may be electronically ordered through HMS, test order #0570.

Should you need additional information or clarification please contact Ms. Imelda Ignacio-Hernando at (904) 791-1531, or Mr. Berry Bennett at (904) 791-1527.

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