

Test Menu

TOPIC	DESCRIPTION
Test Name	HIV-1 Genotyping (drug resistance testing)
Other Name (s)	HIV-1 Targeted Next Generation Sequencing
Analyte(s)	HIV-1
Test Code	0570
Lab location	Jacksonville location
Department	Retrovirology (HIV)
Prior Authorization	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.
Required Forms	none
Specimen Sources	Plasma
Supplemental Information- Special Specimen Preparation	Centrifuge PPT within 8 hours of collection, see "Storage Conditions". Shipment must be sent priority overnight.
Minimum Volume	At least 2.5ml plasma
Storage Conditions	- HIV-1 Genotype with Viral load maintain $\leq 20^{\circ}\text{C}$ until shipment - HIV-1 Genotype only maintain $2-8^{\circ}\text{C}$ until shipment
Collection Media	PPT (pearl top)
Specimen Labeling	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.
Packaging and Shipping Instructions and Handling	<u>Genotype and Viral load request</u> - Send plasma on dry ice $\leq -20^{\circ}\text{C}$, however if dry ice is not available, specimens may be sent on 3 - 4 foam refrigerant packs in a Styrofoam cooler at $2-8^{\circ}\text{C}$. Please label cooler on the outside with "Genotyping". Do not allow specimens to thaw before shipping. Shipment must be sent priority overnight. <u>Genotype only request</u> - Send plasma on 3 - 4 foam refrigerant packs in a Styrofoam cooler at $2-8^{\circ}\text{C}$. Please label cooler on the outside with "Genotyping". Shipment must be sent priority overnight.
Test Methodology	Targeted Next Generation Sequencing
Turnaround Time	7-10 days
Result Indicator	Current anti-retroviral drug resistance report (mutation report optional) or Invalid
Unsatisfactory Specimen	1) Initial testing indicates that the viral load is below the minimum requirement for further testing. 2) Specimen not centrifuged. 3) Wrong specimen tube received. 4) Information on specimen does not match the requisition/test order 5) Expired collection device was used for specimen collection
Interferences and Limitations	Hemolysis
Additional Information & Notes	HIV-1 viral load must be $> 2,000$ RNA copies/ml blood.
Reference Range	HIV-1 RNA Not Detected
Reference Lab	3 rd party clinical interpretation source
Reflex testing	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.

BB/IIH 6/15/24