

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	Patient name, DOB, Collection date and time
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) Viral load $< 2,000$ RNA copies/ml. 2) Specimen not centrifuged. 3) Wrong specimen tube received.
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”.
- ⇒ 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** 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, 9/15/23