HIV Testing at the State of Connecticut Public Health Laboratory (CT SPHL)

The CT SPHL provides diagnostic HIV testing following the CDC Recommended HIV Laboratory Testing Algorithm for Serum or Plasma Specimens (1,2).

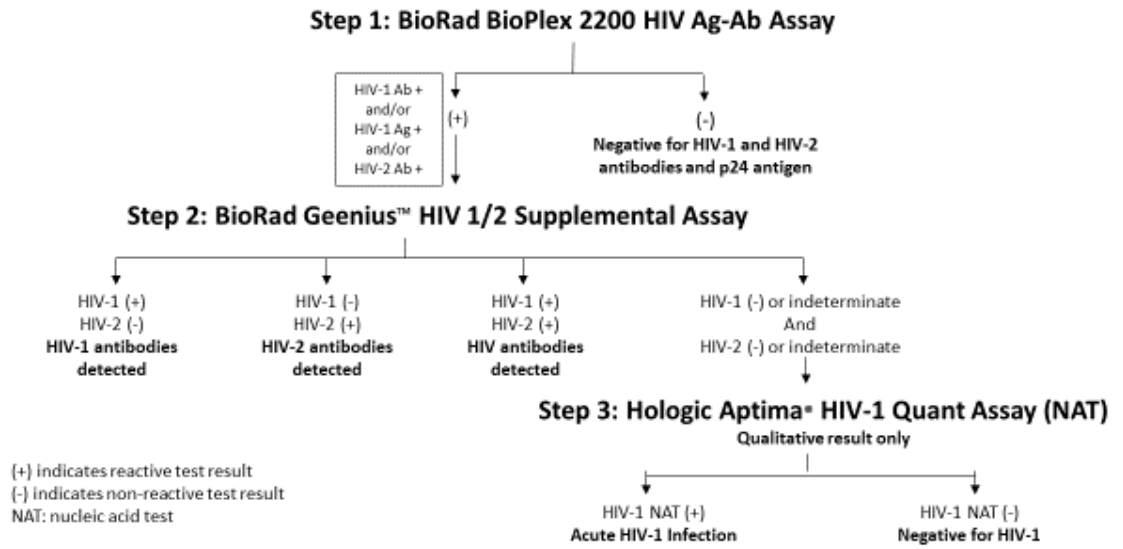
Test Assays

Step 1 includes an FDA-approved HIV-1/2 antigen/antibody immunoassay, the assay performed at the CT SPHL is the **BioRad BioPlex 2200 HIV Ag-Ab Assay** (3).

Step 2 includes an FDA-approved HIV-1/HIV-2 antibody differentiation immunoassay, the assay performed at the CT SPHL is the **BioRad Geenius HIV-1/2 Supplemental Assay** (4).

Step 3 includes an FDA-approved HIV-1 NAT assay, the assay performed at the CT SPHL is the **Hologic Aptima HIV-1 Quant Assay** (5).

Figure 1: HIV Testing Algorithm at the State of Connecticut Public Health Laboratory (CT SPHL)*



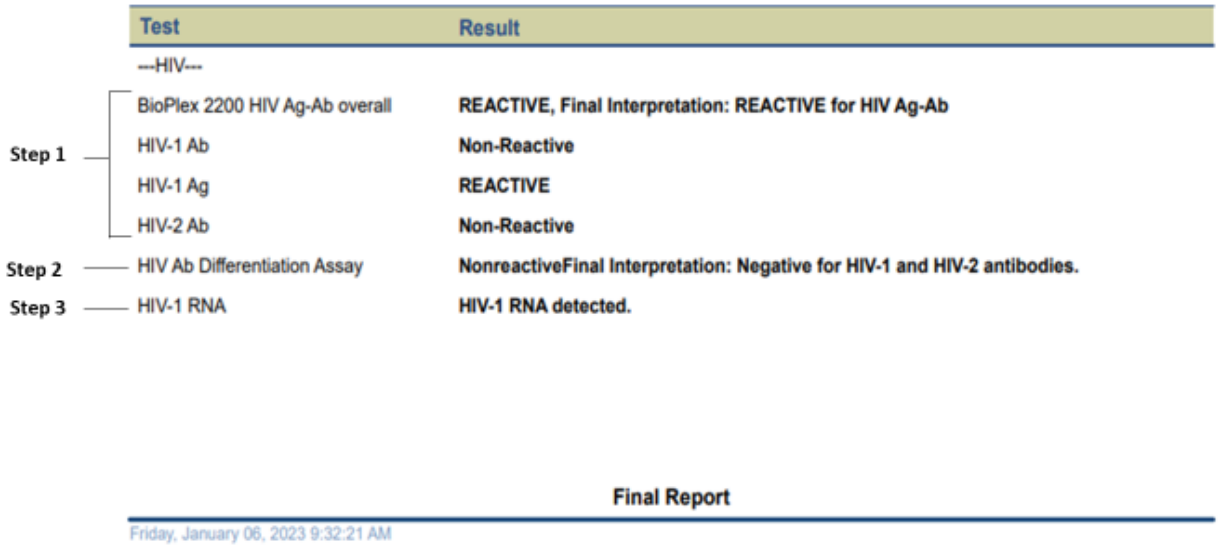
*Current assays in use at the CT SPHL following the CDC Recommended HIV Laboratory Diagnostic Testing Algorithm for Serum or Plasma Specimens

Results

The CT SPHL Clinical Test Report will provide individual results for each HIV Assay performed as indicated in the HIV Testing Algorithm.

The BioRad BioPlex 2200 HIV Ag-Ab assay provides an overall HIV Ag-Ab interpretation and individual analyte results for HIV-1 Ab, HIV-1 Ag and HIV-2 Ab. The overall HIV Ag-Ab result is used to determine if reflex (Step 2) testing is needed.

Figure 2: Example of CT SPHL Clinical Test Report HIV Results



	Test	Result
	---HIV---	
Step 1	BioPlex 2200 HIV Ag-Ab overall	**REACTIVE, Final Interpretation: REACTIVE for HIV Ag-Ab**
	HIV-1 Ab	**Non-Reactive**
	HIV-1 Ag	**REACTIVE**
	HIV-2 Ab	**Non-Reactive**
Step 2	HIV Ab Differentiation Assay	**NonreactiveFinal Interpretation: Negative for HIV-1 and HIV-2 antibodies.**
Step 3	HIV-1 RNA	**HIV-1 RNA detected.**

Final Report

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Figure 2 is an example of the HIV tests and results on the CT SPHL clinical test report.

To assist with HIV Laboratory Testing Algorithm interpretation and further actions please refer to the *Guidance for Reporting Results from the HIV Laboratory Diagnostic Testing Algorithm for Serum and Plasma* Table from the APHL Suggested Reporting Language for HIV Laboratory Diagnostic Testing Algorithm. https://www.aphl.org/aboutAPHL/publications/Documents/HIV-Diagnostic-Test-Reporting-Results-Guidance-2019.pdf

References

1. Centers for Disease Control and Prevention and Association of Public Health Laboratories. Laboratory Testing for the Diagnosis of HIV Infection: Updated Recommendations. 2014. Available from: https://stacks.cdc.gov/view/cdc/23447
2. Centers for Disease Control and Prevention. 2018 Quick reference guide: Recommended laboratory HIV testing algorithm for serum or plasma specimens. Available from: https://stacks.cdc.gov/view/cdc/50872
3. Bio-Rad Laboratories, Inc. BioPlex 2200 System HIV Ag-Ab Kit Instructions for Use. 665-0541C(US), July 2016.
4. Bio-Rad Laboratories, Inc. Geenius HIV 1/2 Supplemental Assay Instructions for Use. Ref: 16003787, Updated September 2017.
5. Hologic, Inc. Aptima HIV-1 Quant Dx Assay Instructions for Use. AW-18107-001 Rev.001, Updated November 2020.
6. Association of Public Health Laboratories. Suggested Reporting Language for the HIV Laboratory Diagnostic Testing Algorithm. Publisher 2019. https://www.aphl.org/aboutAPHL/publications/Documents/ID-2019Jan-HIV-Lab-Test-Suggested-Reporting-Language.pdf