MAYO CLINIC LABORATORIES

Test Definition: FFTRO

Trofile DNA Co-Receptor Tropism Assay

Overview

Useful For

Detect HIV-1 coreceptor tropism; determine eligibility for CCR5 antagonist therapy such as Selzentry™ (maraviroc).

Method Name

Polymerase chain reaction (PCR) amplification and viral culture.

NY State Available

Yes

Specimen

Specimen Type

Whole Blood EDTA

Specimen Required

Specimen Type: Whole Blood
Container/Tube: Lavender-top (EDTA)
Specimen Volume: 4 mL
Collection Instructions: Draw 4 mL blood in a lavender-top (EDTA) tube(s), (Do not centrifuge.) Freeze and ship frozen. To avoid delays in turnaround time when requesting multiple tests, please submit separate frozen specimens for each test requested.
Note: Trofile DNA is recommended for patients with undetectable viral loads.

Specimen Minimum Volume

3 mL

Reject Due To

Other	Insufficient volume; heparinized plasma; non frozen specimen

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Frozen	14 days	

Clinical & Interpretive

Interpretation

Trofile DNA Viral Classification

CCR5 Tropic (R5) HIV-1:
Virus uses CCR5 to enter CD4+ cells.

CXCR4 Tropic (X4) HIV-1:
Virus uses CXCR4 to enter CD4+ cells.

DUAL /MIXED Tropic (D/M) HIV-1:
Dual-tropic viruses can use either CXCR4 or CCR5 to enter CD4+ cells. Mixed-tropic populations contain viruses with 2 or more tropisms.

Nonreportable:
Co-receptor tropism could not be determined. Common causes of nonreportable results are reduced viral fitness or compromised sample handling. Please note that Trofile DNA sample collection and handling instructions differ from Trofile and other Monogram assays.

Trofile uses the complete gp160 coding region of the HIV-1 envelope protein ensuring that all of the determinants of tropism are tested. Subtype is determined based on the HIV-1 gp41 envelope region.

Performance

Method Description

Co-receptor tropism is defined as an interaction of a virus with a specific co-receptor on the target cell. To gain entry into CD4+ cells, HIV must bind to the cell surface CD4 receptor and to one of two co-receptors, CCR5 or CXCR4. Trofile DNA uses the complete gp160 coding region of the HIV-1 envelope protein ensuring that all of the determinants of tropism tested.

Trofile DNA meets the US standards for technical validation as established by the Clinical Laboratory Improvement Amendments. Trofile DNA is a single cycle pseudovirion based tropism assay that uses the complete gp160 coding region of HIV-1 to evaluate tropism. Instead of using HIV-1 RNA isolated from patient plasma, Trofile DNA uses cell associated viral DNA taken from whole blood cells infected with HIV. HIV-1 envelopes encoded by the viral DNA are tested in a cell-based viral infectivity assay in order to determine which co- receptor the HIV-1 virus population is capable of using: CCR5, CXCR4, or both, known as D/M (dual/mixed).

PDF Report

No

Day(s) Performed

Sunday through Saturday

Report Available

31 to 37 days

Performing Laboratory Location

Monogram Biosciences, Inc

Fees & Codes

Fees

- Authorized users can sign in to Test Prices for detailed fee information.
- Clients without access to Test Prices can contact Customer Service 24 hours a day, seven days a week.
- Prospective clients should contact their account representative. For assistance, contact Customer Service.

CPT Code Information

87999

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
FFTRO	Trofile DNA Phenotypic Corecept Tro	53923-9

Result ID	Test Result Name	Result LOINC® Value
Z2283	Tropotype Result	53923-9
Z2284	Interpretation:	Not Provided