

LABSTRACT – Released March 2015,
Updated September 2019

HIV HLA-B*57:01 Abacavir Hypersensitivity assay available through the British Columbia Centre for Excellence in HIV

Audience

Health care providers who order HIV testing for monitoring and treatment purposes

Overview

The Public Health Ontario Laboratory (PHO Laboratory) offers **HLA-B*5701 Abacavir hypersensitivity testing**. Testing is performed at the B.C. Centre for Excellence in HIV/AIDS (BC-CfE) Laboratory in Vancouver on all eligible specimens where the test was requested.

Background information

Abacavir is a drug used to treat HIV infection, similar to zidovudine (AZT) and lamivudine (3TC). Most patients can safely take Abacavir; however, approximately 5% of patients who take abacavir experience a severe side effect known as Abacavir hypersensitivity. This reaction can sometimes be very serious and in some cases may be fatal. People who have a specific gene called HLA-B*57:01 are much more likely to have this reaction than patients who do not. Therefore, patients with the HLA-B*57:01 gene should not take Abacavir.

Content

A HLA-B*57:01 screening test can be ordered before the start of a therapeutic regimen containing Abacavir. In contrast to other HIV laboratory tests such as HIV viral load and CD4 count which can change over time, a person's HLA-B*57:01 result does not change. Therefore this test only needs to be performed once.

What do the test results mean?

A positive test result means that a patient has the HLA-B*57:01 gene and is at higher risk of a hypersensitivity reaction. In general, this patient should not take Abacavir. A negative test result means that a patient does not have the HLA-B*57:01 gene, suggesting that the patient is at low risk for a hypersensitivity reaction. However, having a negative test result does not guarantee that Abacavir hypersensitivity will not develop and the risks and benefits of prescribing Abacavir as part of any therapeutic regimen should be considered.

Specimen Requirements

1. Appropriate specimen and volume:
 - A separate 3-5 mL of whole blood collected in EDTA (Lavender top) Vacutainer tube
2. Specimen processing: Please note that specimen processing requirements differ depending upon delivery time:
 - Specimens should be delivered within 24 hours of collection to PHO Laboratory Toronto, during regular business hours from Monday to Friday from 8:00 am to 4:15 pm. Vacutainer tubes must be maintained at approximately 4°C using ice packs or other means during shipping.
 - If specimens will take longer than 24 hours from the time of collection to arrive at PHO Laboratory, 2 mL of whole blood should be transferred to each of two 2.5 mL screw cap cryovials and stored frozen at -20°C or lower until ready for delivery to PHO Laboratory. Frozen aliquots can then be shipped to PHO Laboratory.

Requisition

Use the HIV Genotyping, Resistance and Tropism request form (F-C-HV-142) to request **HLA-B*57:01 Abacavir Hypersensitivity testing**. The form is accessible at <https://www.publichealthontario.ca/-/media/documents/lab/hiv-genotyping-tropism.pdf?la=en>

Turnaround Time

The turnaround time for results is expected to be approximately 3-6 weeks from receipt. Test results will be forwarded by PHO Laboratory to the submitter as soon as they are received from the BC-CfE.

For further information

- Contact the PHO Laboratory Customer Service Centre at 416-235-6556 or 1-877-604-4567 (toll-free), or by email at customerservicecentre@oahpp.ca
- For PHO Laboratory specimen collection information and previous Lababstracts, refer to [publichealthontario.ca/test directory](http://publichealthontario.ca/test-directory)
- The current version of the PHO Laboratory General Test Requisition and other forms are available at publichealthontario.ca/Requisitions
- To subscribe to future Lababstracts, [register on our website](#)
- To register for Autofax and receive laboratory reports by fax directly from our laboratory information system as soon as they are released, contact the PHO Laboratory Customer Service Centre.