

Cytochrome P450 2C9 Genotype, Varies

Test ID: 2C9QT

Useful for:

Identifying individuals who may be at risk for altered metabolism of drugs that are modified by cytochrome P450 2C9

Method:

Real-Time Polymerase Chain Reaction (PCR) with Allelic Discrimination Analysis

Advisory Information:

If patient is or will be using warfarin, the preferred test is WARSQ / Warfarin Response Genotype, Varies which includes testing of *CYP2C9*, *VKORC1*, *CYP4A2*, and rs12777823.

Testing is available as the single gene assay (this test) or as a part of a focused pharmacogenomics panel, which includes testing for the following genes: *CYPs 1A2, 2C9, 2C19, 2D6, 3A4, 3A5, 4F2, SLCO1B1*, and *VKORC1*.

Order PGXQP / Focused Pharmacogenomics Panel, Varies if multiple pharmacogenomic genotype testing is desired.

Reference Values:

An interpretive report will be provided.

Specimen Requirements:

Multiple genotype tests can be performed on a single specimen after a single extraction.

Submit only 1 of the following specimens:

Specimen Type: Whole blood

Container/Tube: Lavender top (EDTA)

Specimen Volume: 3 mL

Collection Instructions:

1. Invert several times to mix blood.
2. Send specimen in original tube.

Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days

Specimen Type: Saliva

Patient Preparation: Patient should not eat, drink smoke, or chew gum 30 minutes prior to collection.

Supplies: Saliva Swab Collection Kit (T786)

Specimen Volume: 1 Swab

Collection Instructions: Collect and send specimen per kit instructions.

Specimen Stability Information: Ambient 30 days

Specimen Type: Extracted DNA

Container/Tube: 2 mL screw top tube

Specimen Volume: 100 mcL (microliters)

Collection Instructions:

1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL.
2. Include concentration and volume on tube.

Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated

Specimen Stability Information:

| Specimen Type | Temperature | Time |
|---------------|-------------|------|
| Varies | Varies | |

Cautions:

Rare variants may be present that could lead to false-negative or false-positive results. If results obtained do not match the clinical findings (phenotype), additional testing should be considered.

Samples may contain donor DNA if obtained from patients who received non-leukoreduced blood transfusions or allogeneic hematopoietic stem cell transplantation. Results from samples obtained under these circumstances may not accurately reflect the recipient's genotype. For individuals who have received blood transfusions, the genotype usually reverts to that of the recipient within 6 weeks. For individuals who have received allogeneic hematopoietic stem cell transplantation, a pretransplant DNA specimen is recommended for testing.

CYP2C9 genetic test results in patients who have undergone liver transplantation may not accurately reflect the patient's *CYP2C9* status.

This method may not detect all variants that result in altered *CYP2C9* activity. Therefore, absence of a detectable variant does not rule out the possibility that a patient has altered *CYP2C9* metabolism due to other *CYP2C9* variants that cannot be detected with this method. Furthermore, when 2 or more variants are identified, the cis-/trans- status (whether the variants are on the same or opposite chromosomes) is not always known.

CPT Code:

81227

Day(s) Setup: Monday through Friday

Analytic Time: 3 days; not reported on Saturday or Sunday

Questions

Contact Heather Flynn Gilmer, Laboratory Technologist Resource Coordinator at 800-533-1710.