

## Solute Carrier Organic Anion Transporter Family Member 1B1 (*SLCO1B1*) Genotype, Statin, Varies

**Test ID:** SLC1Q

### Useful for:

Predicting risk for statin-associated myopathy in patients beginning statin therapy, especially simvastatin therapy

Determining a potential statin lipid lowering response, especially when using pravastatin

### Genetics Information:

This is a pharmacogenomics test for genotype for the rs4149056 (c.521T>C) variant found in the \*5, \*15, and \*17 alleles, and rs4149015 (c.-910G>A) found in the \*17 and \*21 alleles. Presence of the \*5 allele is associated with an increased risk for simvastatin-associated myopathy.

### Methods:

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

### Advisory:

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 Stability Information:

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

### 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:** 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)/Ambient/Refrigerated

### **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. SLCO1B1 genetic test results in patients who have undergone liver transplantation may not accurately reflect the patient's SLCO1B1 status.

Simvastatin-related myopathy can occur in the absence of SLCO1B1 c.521T>C.

The presence of SLCO1B1 c.521T>C does not confer absolute risk for simvastatin-associated myopathy.

Absence of a variant allele does not rule out the possibility that a patient harbors another variant that can impact medication efficacy and side effects.

### **CPT Code:**

81328

**Day(s) Setup:** Monday through Friday (not reported on Saturday or Sunday)

**Analytic Time:** 3 days

### **Questions**

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