MAYO CLINIC LABORATORIES

1-800-533-1710

# SLC1Q

SLCO1B1 Genotype, V

| Patient ID | Patient Name | | Birth Date | Sex | Age |
|---|---|---|---|---|---|
| SA00175249 | TESTINGRNV, SLC1Q NORMAL | | 1991-11-01 | M | 33 |
| **Order Number** | **Client Order Number** | **Ordering Physician** | **Report Notes** | | |
| SA00175249 | SA00175249 | CLIENT,CLIENT | | | |
| **Account Information** | | **Collected** | | | |
| C7028846 DLMP Rochester | | 15 Apr 2025 00:00 | | | |

## Results

| Analyte | Result | Performing Site |
|---|---|---|
| *SLCO1B1* Genotype | *1/*1 | MCR |
| SLCO1B1 Phenotype | Normal function | MCR |

## Interpretation

MCR

Normal risk of simvastatin-associated myopathy. However, risk of myopathy related to statin use is not eliminated, since other statin intolerance factors may be present (e.g. other genetic factors, drug-drug interactions, etc.). SLCO1B1 encodes the organic anion-transporting polypeptide 1B1 (OATP1B1) influx transporter located on the basolateral membrane of hepatocytes. OATP1B1 facilitates the hepatic uptake of statins as well as other endogenous compounds (e.g. bilirubin). Changes in the activity of this transporter (e.g. through genetic variations or drug-drug interactions) can increase the severity of statin-associated myopathy (i.e. statin intolerance). Absence of a variant allele does not rule out the possibility that a patient harbors another variant that can impact medication efficacy and/or side effects.

### Method

MCR

Genotyping is performed using a PCR-based 5'-nuclease assay. Fluorescently labeled detection probes anneal to the target DNA. PCR is used to amplify the segment of DNA that contains the polymorphism. If the detection probe is an exact match to the target DNA, the 5'-nuclease polymerase degrades the probe, the reporter dye is released from the effects of the quencher dye, and a fluorescent signal is detected. Genotypes are assigned based on the allele-specific fluorescent signals that are detected. (TaqMan SNP Genotyping Assays User Guide, Applied Biosystems)

### Disclaimer

[1] MCR

Targeted analysis was used for determining the SLCO1B1 genotype for the rs4149056 (c.521T>C) variant, based on GRCh37 NM_006446.4.

### CAUTIONS:

Rare variants may be present that could lead to false negative or 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 have recently 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 pre-transplant 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.

### Reviewed by

MCR

Ann Marie Moyer, M.D., Ph.D.

**Received:** 15 Apr 2025 10:49 **Reported:** 16 Apr 2025 17:29

### Laboratory Notes

[1] This test was developed and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. This test has not been cleared or approved by the U.S. Food and Drug Administration.

**Performing Site Legend**

| Code | Laboratory | Address | Lab Director | CLIA Certificate |
|---|---|---|---|---|
| MCR | Mayo Clinic Laboratories - Rochester Main Campus | 200 First Street SW, Rochester, MN 55905 | Nikola Baumann Ph.D. | 24D0404292 |