| Patient Name | Patient ID | Age | Gender | Order # |
|---|---|---|---|---|
| SAMPLEREPORT,2C9S | SA00059701 | 47 | F | SA00059701 |
| **Ordering Phys** CLIENT,CLIENT | | | | **DOB** 06/10/1966 |
| **Client Order #** SA00059701 | **Account Information** | | | **Report Notes** |
| **Collected** 07/02/2013 00:00 | C7028846-DLMP Rochester<br>3050 Superior Drive<br>Rochester, MN 55901 | | | |
| **Printed** 07/03/2013 15:04 | | | | |

| Test | Flag | Results | Unit | Reference Value | Perform Site* |
|---|---|---|---|---|---|

**CYP2C9 Sequence Genotype**
**RECEIVED:** 07/03/2013 14:32 **REPORTED:** 07/03/2013 14:57
CYP2C9 Genotype
CYP2C9 Phenotype Interpretation MCR

Predicted intermediate metabolizer. This patient has a genotype associated with reduced enzyme activity. This patient will have reduced enzyme activity as compared to individuals with the normal genotype. Some caution should be exercised when treating with drugs metabolized by CYP2C9. There is a small residual risk of having an additional rare, undetected polymorphism which may result in poor metabolizer status. This should be considered if the predicted phenotype is discordant with clinical findings.
Bidirectional DNA sequence analysis was used to test for the presence of variants in exons 3, 5, and 7 of the CYP2C9 gene. These sequencing reactions detect the presence of CYP2C9 430C>T (*2), 818delA (*6), 1075A>C (*3), 1076T>C (*4), and 1080C>G (*5). This sequencing assay will not detect all the known mutations that result in decreased or inactive CYP2C9. Rare polymorphisms could interfere with test results. Absence of a detectable gene mutation or polymorphism does not rule out the possibility that a patient has an intermediate or poor metabolizer phenotype. Patients with an extensive or intermediate metabolizer genotype may have CYP2C9 enzyme activity inhibited by a variety of medications or their metabolites. The following is a partial listing of drugs known to affect CYP2C9 activity as of the date of this report.

Drugs that undergo metabolism by CYP2C9:
Angiotensin II Blockers: irbesartan, losartan
Anticoagulants: warfarin
Anti-depressants: amitriptyline (minor), fluoxetine (minor)
Non-Steroidal Anti-Inflammatory Drugs (NSAIDS): celecoxib, diclofenac, ibuprofen, naproxen, piroxicam, suprofen Oral Hypoglycemic Agents: glipizide, glimepiride, glyburide/glibenclamide, nateglinide, tolbutamide
Miscellaneous Drugs: fluvastatin, phenytoin, rosuvastatin (minor), sulfamethoxazole, tamoxifen, torsemide.
Co-administration may decrease the rate of elimination of other drugs metabolized by CYP2C9.

Drugs known to increase CYP2C9 activity: Phenobarbital,

***Performing Site Legend on Last Page of Report***

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| rifampin, secobarbital. Co-administration of these drugs increase the concentration of CYP2C9. | | | | | |
| Drugs known to decrease CYP2C9 activity: Amiodarone, fenofibrate, fluconazole, fluvastatin, fluvoxamine, isoniazid, lovastatin, phenylbutazone, sertraline, sulfamethoxazole, sulfaphenazole, teniposide, ticlopidine, voriconazole, zafirlukast. Co-administration will decrease the rate of metabolism of CYP2C9 metabolized drugs, increasing the possibility of toxicity, particularly in heterozygous individuals. | | | | | |
| Laboratory developed test. | | | | | |
| CYP2C9 Genotype Star Alleles | | 1/2 | | | MCR |
| For a full description of CYP2C9 alleles, see: http://www.cypalleles.ki.se/cyp2c9.htm. | | | | | |
| CYP2C9 430C>T (*2) | | C/T | | | MCR |
| CYP2C9 818DelA (*6) | | A/A | | | MCR |
| CYP2C9 1075A>C (*3) | | A/A | | | MCR |
| CYP2C9 1076T>C (*4) | | T/T | | | MCR |
| CYP2C9 1080C>G (*5) | | C/C | | | MCR |
| CYP2C9 Genotype Interpretation | | | | | MCR |
| This patient has one copy of an allele encoding CYP2C9 protein with reduced activity and one copy with normal activity. Additional descriptions of the effects of the star alleles on CYP2C9 function are found in the Mayo Test Catalog (http://www.mayomedicallaboratories.com/test-catalog/). | | | | | |
| CYP2C9 Reviewed by | | LAURA TRAIN | | | MCR |
| CYP2C9 Sequencing | | Performed | | | MCR |

* Performing Site:

| | | |
|---|---|---|
| MCR | Mayo Clinic Laboratories - Rochester Main Campus<br>200 First St SW Rochester, MN 55905 | Lab Director: Franklin R. Cockerill, III, M.D. |