

Patient Name SAMPLEREP,2D6 N	Patient ID SA00059521	Age 47	Gender F	Order # SA00059521
Ordering Phys CLIENT,CLIENT				DOB 06/10/1966
Client Order # SA00059521	Account Information			Report Notes
Collected 06/27/2013 00:00	C7028846-DLMP Rochester 3050 Superior Drive Rochester, MN 55901			
Printed 07/08/2013 13:42				

Test	Flag	Results	Unit	Reference Value	Perform Site*
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CYP2D6 Genotype
RECEIVED: 07/01/2013 14:38 **REPORTED:** 07/08/2013 11:33

2D6 Phenotype Interpretation

MCR

Predicted extensive (normal) metabolizer. This patient has a genotype associated with extensive (normal) enzymatic activity. There is a small residual risk of having a rare, undetected polymorphism which may result in intermediate or poor metabolizer status. This should be considered if the predicted phenotype is discordant with clinical findings. Direct polymorphism analysis for -1584C>G, 100C>T, 124G>A, 138insT, 883G>C, 1023C>T, 1707T>del, 1758G>T, 1758G>A, 1846G>A, 2549A>del, 2613delAGA, 2850C>T, 2935A>C, 2988G>A, CYP2D6 gene deletion, and gene duplication is performed following PCR amplification. Direct DNA testing will not detect all the known mutations that result in decreased or inactive CYP2D6. Absence of a detectable gene mutation or polymorphism does not rule out the possibility that a patient has an intermediate or poor metabolizer phenotype. Based on the test sensitivity and currently available CYP2D6 polymorphism carrier frequencies, persons of Caucasian descent who tested negative for the above polymorphisms would be estimated to have a less than 1.4 percent residual risk for carrying one or more copies of an undetected poor metabolizer allele. This residual risk may be higher or lower in other ethnic groups. The frequency of polymorphisms causing poor metabolism is highest in the Caucasian population and lower in African Americans and Asians. Patients with an extensive (normal) or intermediate metabolizer genotype may have CYP2D6 enzyme activity inhibited by a variety of medications, or their metabolites. The following is a partial listing of drugs known to affect CYP2D6 activity as of the date of this report.

Drugs known to increase CYP2D6 activity: Dexamethasone and rifampin. Co-administration of these drugs will increase the rate of excretion of CYP2D6 metabolized drugs, reducing that drug's effectiveness.

Drugs known to decrease CYP2D6 activity: Amiodarone, bupropion, celecoxib, chlomipramine, chlorpheniramine, chlorpromazine, cimetidine, cinacalcet, citalopram, cocaine, dexmedetomidine, diphenhydramine, doxepine, duloxetine, escitalopram, fluoxetine, haloperidol,

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<p>halofantrine, hydroxyzine, indinavir, levomepromazine, methadone, metochlopramide, moclobemide, paroxetine, perazine, pergolide, perphenazine, pimozide, quinidine, ranitidine, ritonavir, sertraline, tegaserod, terbinafine, thioridazine and triclopidine. Co-administration will decrease the rate of metabolism of CYP2D6 metabolized drugs, increasing the possibility of toxicity.</p> <p>Drugs that undergo metabolism by CYP2D6: Alprenolol, amitriptyline, amphetamine, aripiprazole, atomoxetine, bufuradol, carvedilol, chlorpheniramine, chlorpromazine, clomipramine, codeine, debrisoquine, desipramine, dextramethorphan, dexfenfluramine, diltiazem, disopyramide, donepezil, duloxetine, encainide, flecainide, fluoxetine, fluvoxamine, haloperidol, iloperidone, imipramine, labetalol, lidocaine, metoclopramide, methoxyamphetamine, metoprolol, mexilitine, minaprine, mirtazapine, nebivolol, nortriptyline, oxycodone, ondansetron, paroxetine, pergolide, perhexiline, perphenazine, promethazine, phenformin, pimozide, propafenone, propranolol, risperidone, sparteine, sertraline, tamoxifen, thioridazine, tegaserod, timolol, tramadol, venlafaxine and zuclopenthixol. Co-administration may decrease the rate of elimination of other drugs metabolized by CYP2D6. Analyte Specific Reagent: This test was developed and its performance characteristics determined by Mayo Clinic. It has not been cleared or approved by the U.S. Food and Drug Administration.</p>					
2D6 Genotype Star Alleles		1/1			MCR
See http://www.cypalleles.ki.se/cyp2d6.htm for a full description of CYP2D6 alleles.					
2D6 Duplication		See Below			MCR
Result: Duplication Not Present					
2D6 Deletion		Deletion Not Present			MCR
2D6 -1584c>g (*2A)		C/C			MCR
2D6 100c>t (*10)		C/C			MCR
2D6 124g>a (*12)		G/G			MCR
2D6 138inst (*15)		WT			MCR
2D6 883g>c (*11)		G/G			MCR
2D6 1023c>t (*17)		C/C			MCR
2D6 1707tdel (*6)		T/T			MCR
2D6 1758g>t/a (*8/*14)		G/G			MCR
2D6 1846g>a (*4)		G/G			MCR
2D6 2549adel (*3)		A/A			MCR

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2D6 2613agadel (*9)		WT			MCR
2D6 2850c>t (*2)		C/C			MCR
2D6 2935a>c (*7)		A/A			MCR
2D6 2988g>a (*41)		G/G			MCR
2D6 Genotype Interpretation		This patient has two copies of alleles encoding CYP2D6 protein with normal activity. Additional descriptions of the effects of the star alleles on CYP2D6 function are found in the Mayo Test Catalog (http://www.mayomedicallaboratories.com/test-catalog/).			MCR
2D6 Reviewed by		Jennifer Herman			MCR

* Performing Site:

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