

## Cytochrome P450 2D6 Genotyping

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### DESCRIPTION:

- CYP2D6 metabolizes 25% of all prescribed drugs, such as codeine, tricyclic antidepressants (e.g. nortriptyline), SSRIs fluvoxamine, SSNRI venlafaxine, classical antipsychotics (e.g. haloperidol), and beta-blockers. Genetic polymorphisms of CYP2D6 could be used to predict enzyme activity levels and potential effects on drug metabolism. Decreased activity of CYP2D6 may result in reduced or absent therapeutic benefit and an adverse drug reaction due to metabolite buildup in the body. Specific variants in this gene also influence the metabolism of the breast cancer drug, tamoxifen, in post-menopausal women. This should be considered prior to initiating or modifying treatment or supplementing with additional drugs.

### REASON FOR REFERRAL:

- Drug metabolism enzyme genotyping

### METHOD OF ANALYSIS:

- Tag-It Mutation Detection Kit for P450-2D6v2 analyzed on Luminex microbead array platform
- The metabolism of drugs is also influenced by ethnicity, diet, and other medications. All factors should be considered prior to initiating new therapy.

### SAMPLE REQUIREMENTS:

- 5-7 mL whole blood collected in a lavender-top (EDTA) or gold-top (ACD) Vacutainer
- Maintain specimens at room temperature or refrigerate.

### TEST CPT CODES:

- CPT 83891 Isolation
- CPT 83892 Enzymatic digestion
- CPT 83900 Amplification of patient nucleic acid, multiplex, first two nucleic acid sequences, each
- CPT 83901 Amplification of patient nucleic acid, multiplex, each additional
- CPT 83914 Mutation ID by enzymatic ligation or primer extension single segment, each segment
- CPT 83909 Separation and identification by high resolution technique
- CPT 83912 Interpretation and report

*Discounts from list price are available for institutional billing under contractual arrangement with the laboratory. Contact Ellen Livers at 800-447-6614 ext 7523.*