

CaffeineGEN™ Test Report

Date Sample Received: April 1, 2008
Report Date: April 4, 2008



Customer Name: Jane Doe
Customer ID: caf002

Reviewed by:

Laboratory Manager

Laboratory Director: Chinh Bach, PhD

Results:

Your genotype at the CYP1A2 gene is *1A/*1A. Therefore, you are a **FAST** caffeine metabolizer.

Summary and Interpretation of Results:

A cheek swab sample was submitted to the Consumer Genetics laboratory for the customer Jane Doe for genetic testing to determine the genotype at the cytochrome P450 1A2 gene (CYP1A2). DNA was extracted from the swab and tested using standard protocols. All controls and data passed QA inspection.

The "caffeine gene" (CYP1A2) has two variant forms: "fast" variant *CYP1A2*1A* and "slow" variant *CYP1A2*1F*. Every person has 2 copies of the CYP1A2 gene, one inherited from each parent. The combination of these variants determines whether a person is a fast or slow metabolizer of caffeine. The CYP1A2 genotype of each individual can be either "fast/fast", "fast/slow" or "slow/slow". Rapid caffeine metabolism is indicative of 2 copies of the **fast variant** (*CYP1A2*1A*). Individuals with this genotype (*CYP1A2*1A/*1A*) are referred as "fast" caffeine metabolizers. In contrast, slow caffeine metabolism is a result of inheriting at least one **slow variant** (*CYP1A2*1F*). Therefore, individuals who are either homozygous ("slow/slow") or heterozygous ("fast/slow") metabolize caffeine slowly.

As a FAST caffeine metabolizer:

- Moderate caffeine consumption of 200-300mg (2-3 cups of coffee) per day has a protective effect in reducing risk of nonfatal myocardial infarction (MI), commonly known as a nonfatal heart attack. ^[1]
- Heavy caffeine consumption (≥4 cups/day) will NOT increase your risk of nonfatal MI. ^[1]
- Women who consume 100-300mg of caffeine (1-3 cups of coffee) per day do not have an increased risk of pregnancy loss and do not affect their fertility.

[1]. Cornelis MC, et al. JAMA 2006; 295: 1135-1141c

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