

CYP450 2D6T (Tamoxifen)

SPOT ON INFINITI™

The Automated Multiplexing MDx Solution



Product Design

- ▶ The INFINITI™ CYP450 2D6T Assay is designed to identify patients with select genetic variants of CYP450 2D6.
- ▶ The INFINITI CYP450 2D6T Assay utilizes the CYP450 2D6T Intellipac™, CYP450 2D6T Amp Mix and CYP450 2D6T BioFilmChip™ Microarray.
- ▶ The INFINITI CYP450 2D6T Assay is automated by the 510(k) cleared INFINITI Analyzer.
- ▶ Clinical validation is currently in progress.

Benefits



VERSATILITY	◆	Multiplexed determination of 8 genetic variants on one BioFilmChip Microarray
EFFICIENCY	◆	Customized reports allow for corresponding metabolic status
AGILITY	◆	<i>Load N Go</i> automation with the INFINITI Analyzer
INTEGRITY	◆	Replicate determinations on a single BioFilmChip Microarray ensure quality results

Genetic Variants

*2 (2850C>T)	*6 (1707delT)
*3 (2549delA)	*9 (2613_2615delAGA)
*4 (1846G>A)	*29 (1659G>A)
*5 (deletion)	*41A (2988G>A)

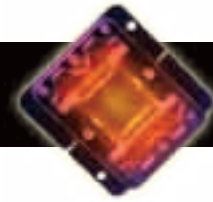
Sample Type and Volume

0.2 – 2.0 ml of peripheral whole blood in EDTA (purple-top) tube
50 ng DNA / reaction

Product Information

Product No.	Product Name	Description	Pack Size
03 112	INFINITI CYP450 2D6T BioFilmChip	12 BioFilmChips / Magazine	4 Magazines / pack
03 212	INFINITI CYP450 2D6T Intellipac	24 tests / IntelliPac	2 Intellipacs / pack
03 312	INFINITI CYP450 2D6T Amp Mix	250 µl / vial	4 vials / pack

Please contact AutoGenomics to obtain product information and for product status updates.



Clinical Relevance ¹

- ▶ CYP450 2D6 significantly impacts the metabolism of tamoxifen which is indicated for the treatment of breast cancer.
- ▶ Cytochrome P450 enzymes are a family of functional proteins encoded by 60 genes and play a crucial role in the metabolism of drugs. Almost every drug is processed by some of these enzymes.
- ▶ CYP450 2D6 is a metabolic liver-enzyme that biotransforms approximately 25% of known drugs metabolized by CYP enzymes. 2D6 is involved in the metabolism of xenobiotics and drugs and is responsible for more than 70 different drug oxidations.
- ▶ 7 - 10% of all Caucasians are poor metabolizers and may suffer toxicity from normally prescribed doses. 2D6 is probably the most well-studied P450 with a drug metabolism polymorphism.
- ▶ Approximately 7 - 10% of Caucasians are poor metabolizers of drugs metabolized by CYP2D6.

Clinical Utility ²

- ▶ Detection of a polymorphism or mutation in CYP2D6 can help to determine whether or not a person has a drug metabolism that is either too slow or too rapid. In practice, the many variations of 2D6 genes fall into four groups in terms of how they affect drug metabolism:
 - **Extensive Metabolizers (EM)** are the most common group. They have a normal response to the standard dose of a particular drug.
 - **Intermediate Metabolizers (IM)** may have the problems of poor metabolizers, though usually not as serious.
 - **Poor Metabolizers (PM)** have problems processing the standard dose of a drug, because their genes do not produce a functional 2D6 enzyme.
 - **Ultra Metabolizers (UM)** have one or more extra genes that produce the 2D6 enzyme, so they create more enzyme than normal.

References

1. Leon, J. Barnhill, Pilot Study of the Cytochrome P450-2D6 Genotype in a Psychiatric State Hospital
2. http://www.dnadirect.com/patients/tests/2D6/what_is.jsp