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## SENSITIVE ASSAY FOR 5 $\alpha$ -DIHYDROTESTOSTERONE

### DIAGNOSTICS

High-throughput assay for detection of keto-steroid hormones at low concentration levels with improved accuracy.

#### TECHNOLOGY TYPE

Assay Platform  
Endocrinology  
Metabolism

#### STAGE OF DEVELOPMENT

Applied in a clinical reference laboratory setting.

#### IP PROTECTION

##### U.S. Utility Patent Issued

Enhanced Sensitivity for  
Analysis of Carbonyl  
Containing Compounds  
Using Mass Spectrometry  
*US9834578B2*

#### LEARN MORE

Reference Number: U-4875

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#### TECHNOLOGY SUMMARY

Circulating androgen 5 $\alpha$ -dihydrotestosterone (DHT) is a major indicator of benign prostatic hyperplasia, which affects over three million men each year in the United States and can lead to prostate cancer. Additionally, polycystic ovarian syndrome (PCOS), which affects 8-10 percent of women, is caused by elevated androgen concentrations. Free testosterone concentration is used as a biomarker of PCOS in women. PCOS causes conditions ranging from type 2 diabetes to obesity and heart disease. Immunoassays for DHT, free testosterone, and other androgens, however, are often inaccurate due to analytical interference.

A simple, high-throughput assay uses specific derivitizing agents to improve detection of keto-steroids, such as DHT and testosterone. This method has enhanced ionization efficiency and can detect analytes at low concentration levels.

#### FEATURES AND BENEFITS

- Enables high sensitivity analysis of free testosterone.
- Improves ionization efficiency of keto-steroids.
- Results in more specific fragmentation.
- Enhances sensitivity of detection.
- Demonstrates potential application for analysis of any keto-steroids.

#### INVENTOR PROFILE

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