



## PROMETHEUS® TPMT Genetics Cat. #3300

### Product Description

PROMETHEUS® TPMT Genetics helps classify patients as one of three genotypes: homozygous normal (wild type), heterozygous or homozygous recessive. Because each patient metabolizes thiopurines differently, the efficacy and toxicity of thiopurines can vary widely from patient to patient. Knowledge of the TPMT genotype may reduce time to response, allow physicians to individualize dosing, identify patients in whom thiopurine therapy should be avoided and help reduce the risk of leukopenia.

- A qualitative evaluation, to determine a patient's genetic ability to produce the thiopurine methyltransferase (TPMT) enzyme.
- Patent protected.
- **Specimen Requirements** - Whole blood, 5.0 mL: EDTA / Lavender Top Tube.
- **Shipping and Handling** - Ambient or refrigerated.
- **Storage Conditions/Stability** - 8 days ambient, 30 days refrigerated.
- **Turn Around Time** – 2 business days from date of receipt.
- **Reference Range** - TPMT\*1/TPMT\*1 - Alleles present are associated with Normal Enzyme Activity.

### Facilities Description

This test was developed and its performance characteristics determined by Prometheus Laboratories Inc. It has not been cleared or approved by the U.S. Food and Drug Administration. Prometheus Laboratories Inc. is a CAP-accredited CLIA laboratory.

### CPT Codes (as applied by Prometheus)

- **83907**, Lysis of cells prior to nucleic acid extraction
- **83898(X3)**, Amplification of patient nucleic acid for three different DNA sequences
- **83896(X6)**, Nucleic acid probe
- **83912**, Interpretation and report

### Literature References

- Dubinsky MC, Reyes E, Ofman J, et al. A cost-effective analysis of alternative disease management strategies in patients with Crohn's disease treated with azathioprine or 6-mercaptopurine. *Am J Gastroenterol*. 2005;100(10):2239-2247.
- Seidman EG, Clinical use and practical application of TPMT enzyme and 6-mercaptopurine metabolite monitoring in IBD. *Rev Gastroenterol Disord*. 2003;3(suppl 1):S30-S38.
- Colombel JF, Ferrari N, Debuysere H, et al. Genotypic analysis of thiopurine s-methyltransferase in patients with Crohn's disease and severe myelosuppression during azathioprine therapy. *Gastroenterology*. 2000;118(6):1025-1030.
- Black AJ, McLeod HL, Capell HA, et al. Thiopurine methyltransferase genotype predicts therapy-limiting severe toxicity from azathioprine. *Ann Int Med*. 1998;129(9): 716-718.
- Stolk JN, Boerbooms AM, de Abreu RA, et al. Reduced thiopurine methyltransferase activity and development of side effects of azathioprine treatment in patients with rheumatoid arthritis. *Arthritis Rheum*. 1998;41(10):1858-1866.