

**TEST CHANGE**

**Thiopurine Metabolites in Red Blood Cells**

3016503, THIOMET

<b>Specimen Requirements:</b>	
Patient Preparation:	Trough collection (within 1 hour prior to the next dose).
Collect:	Lavender (EDTA) or pink (K2EDTA).
Specimen Preparation:	Transport 5 mL whole blood. (Min: 2.5 mL)
Transport Temperature:	Refrigerated.
Unacceptable Conditions:	Gel separator tubes. Hemolyzed or lipemic specimens. Frozen specimens.
<b>Remarks:</b>	
Stability:	Ambient: 24 hours; Refrigerated: 7 days; Frozen: Unacceptable
Methodology:	Quantitative Liquid Chromatography-Tandem Mass Spectrometry
<b>Note:</b>	
CPT Codes:	80299 (Alt code: G0480)
New York DOH Approval Status:	This test is New York DOH approved.

**Interpretive Data:**

Thiopurine drug therapy is used to treat autoimmune diseases, inflammatory bowel disease, acute lymphoblastic leukemia, and to prevent rejection after solid organ transplant. Thiopurine drugs are metabolized to active 6-thioguanine nucleotides, which are regulated by thiopurine methyltransferase (TPMT) and nudix hydrolase 15 (NUDT15). Certain variants in the TPMT and/or NUDT15 genes can be associated with an accumulation of cytotoxic metabolites that increase the risk of drug-related toxicity with standard doses of thiopurine drugs. Thiopurine metabolites concentrations are used to assess therapeutic and toxic concentrations of thiopurine drugs.

<b>INTERPRETIVE INFORMATION:</b>	
Thiopurine metabolites	
6-TG	
Therapeutic range (optimal dosing)	235-450 pmol 6-TGN/8x10 <sup>8</sup> red blood cells
Suboptimal dosing	<235 pmol 6-TGN/8x10 <sup>8</sup> red blood cells
Increased risk for toxicity	>450 pmol 6-TGN/8x10 <sup>8</sup> red blood cells may increase the risk for myelotoxicity and leukopenia
6-MMP	
Increased risk for	>5700 pmol 6-

toxicity	MMPN/8x10 <sup>8</sup> red blood cells may increase the risk for hepatotoxicity
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Reference Interval:

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**HOTLINE NOTE:** There is a component change associated with this test. One or more components have been added or removed. Refer to the Hotline Test Mix for interface build information.