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**Lab Dept:** Flow and Immunology

**Test Name:** QUANTITATIVE LYMPHOCYTE SUBSETS:  
T,B,NK

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***General Information***

**Lab Order Codes:** IMMP

**Synonyms:** Helper/Suppressor Ratio; T- cells; T, B, and/or NK phenotyping; T, B, and/or NK enumeration; T&B subsets

See also: CD4/CD8 Panel and Comprehensive Immune Status Panel

**CPT Codes:** 88184 – Flow cytometry, cell surface, cytoplasmic or nuclear marker, technical component only; first marker  
88185 x4 – Flow cytometry cell surface, cytoplasmic, or nuclear marker, technical component; each additional marker

**Test Includes:** CD3, CD4(CD3+), CD8(CD3+), CD16+56(CD3-), and CD19 relative percentages, absolute values, and a calculated Helper/Suppressor ratio

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***Logistics***

**Test Indications:** Useful for diagnosing an immunodeficiency and to monitor immune status.

**Lab Testing Sections:** Flow Cytometry

**Phone Numbers:** MIN Lab: 612-813-6280

STP Lab: 651-220-6550

**Test Availability:** 3 times weekly determined by volume. **Transport collected specimen immediately to Flow Cytometry. Routine testing is not available on weekends or holidays. Therefore, specimens cannot be used if drawn the day before a 3 day weekend such as Memorial Day, Labor Day or major holiday that falls on a Monday or Friday.**

**Turnaround Time:** 1 – 3 days

**Special Instructions:** See [Test Availability](#)

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***Specimen***

**Specimen Type:** Whole blood

<b>Container:</b>	Lavender top (EDTA) tube
<b>Draw Volume:</b>	2 mL blood in a 2 mL Lavender (EDTA) tube (preferred)*** ***Call the Flow lab at x6-6556 (651-220-6556) if you are unable to obtain 2 mL of blood.
<b>Collection:</b>	Routine venipuncture
<b>Special Processing:</b>	Lab Staff: Keep specimen at room temperature and forward promptly to the laboratory. <b>Do Not</b> centrifuge, refrigerate, or freeze sample.
<b>Patient Preparation:</b>	None
<b>Sample Rejection:</b>	Specimens will not be processed that are clotted; hemolyzed; greater than 72 hours old; collected in the wrong tube type (0.5 mL in a 2 mL tube); or that have been held or handled at a temperature other than room temperature

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### ***Interpretive***

<b>Reference Range:</b>	Age-dependant reference ranges will be provided with results
<b>Critical Values:</b>	N/A
<b>Limitations:</b>	Poor specimen quality will adversely affect the test results (see Specimen section)  The single platform method is linear when the WBC count of the specimen is between 0.2 k/uL and 29.7 k/uL, and its lymphocyte concentration is between 0.1 k/uL and 9.0 k/uL.
<b>Methodology:</b>	Single-platform 4 color direct immunofluorescence method FDA approved for in-vitro diagnostic usage. Flow cytometric analysis based on CD45 gating strategy.  In cases where the WBC count of the specimen exceeds the linearity limits of the single platform method, an alternative two-platform method will be used.
<b>References:</b>	Centers for Disease Control (2003) Guidelines for performing CD4+ T-cell determinations with CD45 Gating in persons with immunodeficiency virus (HIV). MMWR 52 (No. RR-2): 1-18  MultiTEST™ IMK Kit Package Insert. Becton Dickinson Immunocytometry Systems. December 2000

### **Updates:**

