
Lab Dept: Flow and Immunology

Test Name: COMPREHENSIVE IMMUNE STATUS PANEL

General Information

Lab Order Codes: CISP

Synonyms: T-cells; T, B, and/or NK phenotyping; T, B, and/or NK enumeration

See also: [CD4/CD8 Panel](#) and [Immune Status Panel](#)

CPT Codes: 86359 – T cells, total count
86360 – T cells; absolute CD4 and CD8 count, including ratio
81884 – Flow cytometry;cytoplasmic or nuclear marker, technical component only; first marker
88185 X7 – Flow cytometry, cell surface, cytoplasmic or nuclear marker, technical component; each additional marker

Test Includes: Each of the following markers will be identified and reported as relative percentages and absolute numbers. A Helper/Suppressor ratio will also be calculated.

Marker	Cell Type
CD3	T cells
CD3+/HLA-DR+	Activated T cells
CD3-/HLA-DR+	B cells
CD4+(CD3+)	T Helper cells
CD5+/CD19-	Mature T cells
CD5+/CD19+	B cell subset
CD7	T cells, NK cells
CD8+/CD3+	T Suppressor cells, NK subset
CD19	B cells
CD16+56(CD3-)	NK cells
TCR $\alpha\beta$ + /CD3+	T cell $\alpha\beta$ receptor
TCR $\gamma\delta$ + /CD3+	T cell $\gamma\delta$ receptor

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](#). Contact the Flow Cytometry Department to request markers different from those listed.

Specimen

Specimen Type:	Whole blood
Container:	Lavender top (EDTA) tube
Draw Volume:	2 mL blood in a 2 mL Lavender (EDTA) tube (preferred) ***Call the Flow lab at 6-6556 (612-220-6556) if unable to obtain 2 mL of blood.
Collection:	Draw blood in EDTA tube, filling to the tube's intended volume (indicated on label)
Special Processing:	Lab Staff: Keep specimen at room temperature and forward promptly to the laboratory. Do Not centrifuge, refrigerate, or freeze sample.
Patient Preparation:	None
Sample Rejection:	Specimens will not be processed that are clotted, hemolyzed, greater than 72 hours old, collected in wrong tube type (0.5 mL blood in a 2 mL tube), or that have been held or handled at a temperature other than room temperature.

Interpretive

Reference Range:	Age-dependant reference ranges will be provided with results.
Critical Values:	N/A
Limitations:	Poor specimen quality will adversely affect the test results (see Specimen section).
Methodology:	Single-platform 4-color direct immunofluorescence method. The flow cytometric analysis is based on a CD45 gating strategy. The calculation of absolute values is based upon the total leukocyte and relative lymphocyte values obtained. This test was developed and its performance characteristics determined by Children's Hospitals and Clinics. It has not been cleared or approved by the US Food and Drug Administration. Analyte specific reagents (ASR's) are used in many laboratory tests necessary for standard medical care and generally do not require FDA approval.
Contraindications:	Due to the absence of age-related reference values for these markers and marker combinations, this test is not recommended for bone marrow specimens.

References:

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:

10/26/2016: Updated Draw Volume info.

8/1/2019: Update draw volume info.