Lab Dept: Flow and Immunology

Test Name: ALPS PANEL

**General Information**

Lab Order Codes: ALPS

Synonyms: Autoimmune Lymphoproliferative Syndrome Panel

CPT Codes:
- 86359 – T cells, total count
- 86360 – T cells; absolute CD4 and CD8 count; including ratio
- 88184 – Flow cytometry, cell surface, cytoplasmic or nuclear marker, technical component only; first marker
- 88185 x8 – Flow cytometry, cell surface, cytoplasmic, or nuclear marker, technical component; each additional marker

Test Includes:
CD3, CD4(CD3+), CD8(CD3+), CD16+CD56(CD3-), CD19+, HLA DR+/CD3+, HLA DR+/CD3-, TCRαβ+/CD3+, TCRαβ+/CD4-/CD8-, TCRγδ+/CD3+, CD20+/CD5+, relative percentages, absolute values, and a calculated Helper/Suppressor ratio.

**Logistics**

Test Indications: This test is intended for use in the workup of pediatric patients with autoimmune phenomena, lymphadenopathy, splenomegaly, and peripheral lymphocytosis to rule out ALPS as the cause. Clinical manifestations usually occur in pediatric patients with an average age of 22 months at the time of diagnosis.

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**

**Specimen**
Specimen Type: Whole blood

Container: Lavender top (EDTA) tube

Draw Volume: 2 mL blood in a 2 mL Lavender (EDTA) tube
  Minimum volume: 0.5 mL in an EDTA microtainer

Collection: Routine venipuncture

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 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. The immunophenotypic abnormalities associated with ALPS include TCRαβ positive CD4 and CD8 negative T-cells (so called double negative T-cells), CD5 positive B-cells and HLA-DR positive T-cells. In ALPS, all three of these subsets are elevated. Other conditions might have one or two of these subsets but ALPS has an increase in all three.

Critical Values: N/A

Limitations: 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.


  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.

Blessing J et al (Blood, October 15 2001) Immunophenotypic profiles in families with Autoimmune Lymphoproliferative Syndrome, Vol. 98, no. 8


**Updates:**

1/24/2005: Test is all inclusive of parameters formerly included only on a reflexive basis. CPT coding updated for 2005.