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**New Test**      **2014699**      **Maternal T Cell Engraftment in SCID**      **STR-SCID**

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**Methodology:** Polymerase Chain Reaction/Fragment Analysis

**Performed:** Sun-Sat

**Reported:** 5-9 days

**Specimen Required:** Collect: Lavender (EDTA), Pink (K<sub>2</sub>EDTA), Yellow (ACD Solution A), or buccal sample.

Specimen Preparation: Transport 3 mL whole blood. (Min: 3 mL) Increase the amount of blood submitted for patients with low cell counts.

Storage/Transport Temperature: Room temperature. Ship overnight. Specimens should be received within 24 hours of collection for **optimal** isolation of T cells.

Remarks: Please provide the results and date of the patient's most recent WBC and differential counts.

Unacceptable Conditions: Clotted or hemolyzed specimens.

Stability (collection to initiation of testing): Ambient: 48 hours; Refrigerated: 48 hours; Frozen: Unacceptable

**Reference Interval:**

Type Maternal	Maternal cells only.
Type Patient	Patient cells only.
Mixed	Patient and Maternal cells present. Semi-quantitative results of percentage of patient and maternal cells will be reported.

**Interpretive Data:**

**Background Information for Maternal T Cell Engraftment in SCID:**

**Indication:** Severe combined immunodeficiency (SCID) patients lack T cells and cannot recognize and reject maternal T cells from maternal-fetal transfusion. Maternal T cell can proliferate in the absence of host T cells leading to difficulty in determining the host T cell numbers required for the diagnosis of SCID and/or can cause graft-versus-host (GVHD) like presentation.

**Methodology:** PCR followed by capillary electrophoresis. Specimens are analyzed using 15 autosomal markers (D8S1179, D21S11, D7S820, CSF1PO, D3S1358, TH01, D13S317, D16S539, D2S1338, D19S433, vWa, TPOX, D18S51, D5S818, and FGA) and one gender marker (amelogenin).

**Kit Used:** AmpFLSTR Identifiler® PCR Amplification Kit, Applied Biosystems.

**Limit of Detection:** 2 percent of minor cell population.

See Compliance Statement B: [www.aruplab.com/CS](http://www.aruplab.com/CS)

**Note:** T cell genotypes will be compared to the patient's genotype obtained from a buccal sample and maternal genotypes. Therefore, patient peripheral blood and buccal sample and biological mother's specimens must be obtained and genotyped before the allogenic stem cell transplant event to treat SCID occurs. If T cell sorting is not completed before submission, BMT ISOL (2005498) will be added on to order.

**CPT Code(s):** 81268; If cell sorting is performed, add 88184

New York DOH approval pending. Call for status update.

**HOTLINE NOTE:** Refer to the Test Mix Addendum for interface build information.