Tuberculosis Interferon Gamma Release Assay
TSPOT

Collection / Transport

Collection Requirements:
Green top tube (sodium heparin)

Specimen Preparation:
Do NOT centrifuge! Keep at room temperature (18-22°C).
Preferred volume: 10 mL

Pediatric Collection:
Minimum volume: 6 mL

Unacceptable Conditions:
Frozen, clotted, hemolyzed, spun down, citrate anticoagulant (blue top)

Storage Transport Temp:
Maintain and transport specimens at room temperature (18-22°C).
Ship specimens Priority Overnight via Fed Ex in container sufficiently insulated to avoid temperature extremes (<10°C and >37°C).

Stability:
24 hours at room temperature (18-22°C).

Notes:
Samples must arrive within 24 hours of draw and are accepted Monday through noon on Friday.

Overview

Performed:
Mon-Thur

Methodology:
Elispot

Reported:
48 hours
Lab Department:
Immunology Lab - Functional Assay

Synonyms:
t spot;IGRA;T-Spot (Tuberculosis Interferon Gamma Release Assay)

Related Tests:
Quantiferon TB Test (QTB)

Result Interpretation

Reference Interval:
Negative

Interpretive Data:
The T-Spot.TB test is based on the measurement of a cell mediated response to Mycobacterium tuberculosis-specific antigens (ESAT-6 and CFP-10). Peripheral blood mononuclear cells (PBMC) are separated from whole blood and incubated in plates coated with anti-interferon gamma (IFNg) antibodies with these antigens for 16-24 hours. Following incubation, IFNg-producing cells are detected using a second anti-IFNg antibody, an enzyme linked conjugate, and substrate. Controls include unstimulated cells (Nil control) and phytohemagglutinin stimulated cells (Mitogen control). A test is considered positive or borderline when IFNg-spot forming units (SFU) produced in response to either of the TB antigens is significantly greater than the Nil control (TB-Nil; positive = > 8 SFU, borderline = 5, 6 or 7 SFU), and the Mitogen control has a robust IFNg response. The T-Spot.TB result is indeterminate if the Nil control is high (>10 SFU) or the mitogen control is low (< 20 SFU). Although the test is reported qualitatively, IFNg SFU for the individual test conditions are also reported as recommended by the Centers for Disease Control and Prevention1.

The T-Spot.TB detects infections due to M. tuberculosis complex (M. tuberculosis, M. bovis and M. africanum). BCG strains and nontuberculous mycobacteria with the exception of M. marinum, M. kansasii, M. szulgai and M. gordonae do not express ESAT-6 and CFP-10 proteins. Therefore, patients either vaccinated with BCG or infected with most nontuberculous mycobacterial strains should test negative.

T-Spot.TB results should always be interpreted in conjunction with clinical and other relevant laboratory findings.


CPT Codes

CPT Code:
86481