**Collection / Transport**

**Collection Requirements:**

1 mL into each of 4 (Nil, TB1, TB2 and Mitogen) QFT-Plus Blood Collection Tubes.

Draw 1 ml into each tube and fill exactly up to the black line - validated range of 0.8 to 1.2 ml. **DO NOT OVERFILL OR UNDERFILL TUBES**. Immediately after filling tubes, shake firmly 10 times to ensure that the tube surface is coated with blood. **Avoid shaking too vigorously which could cause gel disruption.** Label each of the four tubes and include the time of collection. Maintain tubes at ambient temperature.

**Specimen Preparation:**

Do NOT centrifuge! Keep at room temperature (17-25°C).

**Pediatric Collection:**

1 mL into each of 4 (Nil, TB1, TB2 and Mitogen) QFT-Plus Blood Collection Tubes

**Unacceptable Conditions:**

Improperly filled tubes, frozen or centrifuged specimens.

**Storage Transport Temp:**

Place all four tubes in one biohazard bag and send at ambient (17-25°C) temperature in a well-insulated container to reach the laboratory **within 16 hours of draw**. When shipping, send ambient whole blood Priority Overnight via FedEx and in a well-insulated container.

**Stability:**

Stable at room temperature (17–25°C) for a **maximum of 16 hours** following draw.

**Notes:**

If other blood work is requested, please collect the QFT-Plus In-Tubes LAST.

If a “butterfly needle” is being used to collect blood, a “purge” tube should be used to ensure that the tubing is filled with blood prior to the QFT-Plus Blood Collection tubes being used.

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**Overview**

**Performed:**

Friday

**Methodology:**

Lymphocyte stimulation followed by ELISA
**Reported:**
7-9 days

**Lab Department:**
Immunology Lab - Functional Assay

**Synonyms:**
Quantiferon; QFT; QFT-Plus; IGRA; TB testing

**Related Tests:**
TSPOT

### Result Interpretation

**Reference Interval:**
Negative

**Interpretive Data:**
Assessment of exposure to M. tuberculosis.

**Interpretation:**
QuantiFERON-TB Gold Plus (QFT-Plus) test is the fourth generation in QuantiFERON-TB testing technology assessing cell-mediated response through a quantitative measurement of IFN-γ in a whole blood sample. QFT-Plus is a test that measures the cell-mediated immune (CMI) responses to peptide antigens that simulate mycobacterial proteins. These proteins, ESAT-6 and CFP-10, are absent from all BCG strains and from most non-tuberculosis mycobacteria with the exception of M. kansasii, M. szulgai and M. marinum (1). Individuals infected with M. tuberculosis complex organisms usually have lymphocytes in their blood that recognize these and other mycobacterial antigens. This recognition process involves the generation and secretion of the cytokine, IFN-γ. The detection and subsequent quantification of IFN-γ forms the basis of this test.

QFT-Plus has two distinct TB antigen tubes: TB Antigen Tube 1 (TB1) and TB Antigen Tube 2 (TB2). Both tubes contain peptide antigens from the MTB-complex-associated antigens, ESAT-6 and CFP-10 that are designed to elicit CMI responses from CD4+ T-helper lymphocytes; the TB2 tube contains an additional set of peptides targeted to the induction of CMI responses from CD8+ cytotoxic T lymphocytes. QFT-Plus is an indirect test for M. tuberculosis infection (including disease) and is intended for use in conjunction with risk assessment, radiography, and other medical and diagnostic evaluations.

**US Centers for Disease Control and Prevention (CDC) Guidelines:**
Laborators and clinicians should refer to the current CDC publication Guidelines for Using Interferon Gamma Release Assays to Detect Mycobacterium tuberculosis Infection for further guidance in the use of IGRAs as an aid in the diagnosis of M. tuberculosis infection.
https://www.cdc.gov/mmwr/pdf/rr/rr5905.pdf
Current CDC publications on diagnosis and treating tuberculosis are available at:

### CPT Codes
CPT Code: 86480

Test Name: QuantiFERON -TB Gold Plus In-Tube
Test Code: QFT4