

****NEW TEST****

QuantiFERON-TB Gold PLUS

Dear Biotech Client,

We are happy to introduce a new assay for the detection of the TB infection as of August 1, 2018. Early detection TB infection is critical to prevent the spread of the disease. According to the CDC, Interferon-gamma Release Assays (IGRAs) are preferred for TB testing in most risk groups including:

- Those likely to be infected with TB.
- Anyone with low or intermediate risk of disease progression.
- Those for whom it has been decided that testing for latent TB infection is warranted.

QuantiFERON-TB Gold Plus (QFT-Plus) is the next generation of the industry-leading IGRA for TB detection. The QFT-Plus test uses a peptide cocktail simulating *Mycobacterium tuberculosis* (MTB) proteins to stimulate cells in heparinized whole blood. Detection of interferon- γ (IFN- γ) by enzyme-linked immunosorbent assay (ELISA) is used to identify in vitro responses to these peptide antigens that are associated with MTB infection.

QFT-Plus uses the same principle as QFT-TB Gold. In comparison to QFT-TB Gold, QFT-TB Plus is now optimized with innovative tuberculosis-specific antigens that elicit both CD8 and CD4 T cell responses – enabling a more comprehensive assessment of cell-mediated immune response to TB infection.

During MTB infection, CD4 T cells play a critical role in immunological control through their secretion of the cytokine IFN- γ . Evidence now supports a role for CD8 T cells participating in the host defense to MTB by producing IFN- γ and other soluble factors, which activate macrophages to suppress growth of MTB, kill infected cells, or directly lyse intracellular MTB (1–3). IFN- γ producing MTB-specific CD8 cells have been detected in subjects with LTBI and with active TB (4–7). In addition, MTB-specific CD8 T cells producing IFN- γ have also been detected in active TB subjects with HIV co-infection (8, 9) and in young children with TB disease.

Overall, QFT-Plus is very similar to the previous QFT-TB Gold version – the intended use remains the same. The difference is mainly in the custom blood collection tubes. The Nil and Mitogen tubes remain the same, but the TB Antigen tube has been changed. With QFT-Plus, there are now two TB Antigen tubes – TB Antigen Tube 1 (TB1) optimized to stimulate a CD4 immune response and TB Antigen Tube 2 (TB2) optimized to stimulate both CD4 and CD8 immune responses.

Test Information:

- Order Test Code: #16027
- Specimen Requirement: 4 QUANTIFERON TUBES (GY,P,Y,G); DRAW 1mL BLOOD AND SHAKE 10X. COLLECT MONDAY-FRIDAY ONLY.

Additional Test Information is available on our website via www.biotechclinical.com/test-menu