The association of anti-cytokine antibodies with immune dysregulation, immune deficiency or autoimmunity is increasingly being recognized. For example, anti-GMCSF autoantibodies have long been established to be associated with pulmonary alveolar proteinosis (PAP). And, anti-IFNγ autoantibodies have been noted to be associated with chronic, treatment refractory, extrapulmonary infections with non-tuberculous mycobacterial (NTM) species, anti-IL17 autoantibodies with chronic mucocutaneous candidiasis (CMC) and anti-IFNa autoantibodies with systemic lupus erythematosus (SLEα).

Low titer anti-cytokine autoantibodies may be detected in normal individuals and may serve a regulatory purpose. However, anti-cytokine autoantibodies associated with pathological findings tend to be of high titer and demonstrate significant neutralizing activity in vitro. Recognition of these autoantibodies is of benefit since it may direct the use of adjunctive immunotherapy to modulate the autoantibody titer while continuing with conventional therapies.

**Laboratory Tests Available**

Advanced Diagnostic Laboratories tests for the presence of anti-IFNγ and anti-GMCSF autoantibodies. Detection of these autoantibodies is performed by ELISA to assess titer and by Phospho flow cytometry to assess the ability of the autoantibody to neutralize cytokine mediated signaling.

**Clinical Significance**

The association of anti-cytokine antibodies with immune dysregulation, immune deficiency or autoimmunity is increasingly being recognized. For example, anti-GMCSF autoantibodies have long been established to be associated with pulmonary alveolar proteinosis (PAP). And, anti-IFNγ autoantibodies have been noted to be associated with chronic, treatment refractory, extrapulmonary infections with non-tuberculous mycobacterial (NTM) species, anti-IL17 autoantibodies with chronic mucocutaneous candidiasis (CMC) and anti-IFNa autoantibodies with systemic lupus erythematosus (SLEα).

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**Coming Soon**

Anti-IL17 and anti-IL12 autoantibodies: binding and functional analysis.

**Test Information**

**Test codes:**
- IFNGAB (Autoantibodies to IFNγ)
- GMCSFA (Autoantibodies to GMCSF)

**Method:**
ELISA followed by Flow cytometry

**Reference range:**
Negative

**Specimen requirements:**
1 mL serum

**Transport requirements:**
Ship refrigerated or frozen

**Turn around time:**
14 days

**References:**
3. Chi, C.Y.; Chu, C.C.; Liu, J.P.; et al. Anti-IFN-gamma autoantibodies in adults with disseminated nontuberculous mycobacterial infections are associated with HLA-DRB1*16:02 and HLA-DQB1*05:02 and the reactivation of latent varicella-zoster virus infection. Blood 2013, 121, 1357–1366.