Syphilis IGG Antibody with Reflex

Effective April 25, 2017 and in collaboration with the UC Davis Health Division of Infectious Disease, the Clinical Laboratory will adopt the Reverse Algorithm for Syphilis testing. The Reverse Algorithm requires the initial screening to be performed on serum for Treponema pallidum specific IgG antibodies. Testing is performed on the Bioplex 2200 using multiplex flow immunoassay. The Bioplex has the advantage of greater sensitivity and specificity compared to other EIA (enzyme immunoassay) tests.

Please follow the UC Davis Health Reverse Algorithm for Syphilis testing (attached). In brief, IgG antibodies to Treponema pallidum are present for life, even after Syphilis has been successfully treated. To assist in the diagnosis of untreated infection, sera screening reactive for IgG antibodies to Treponema pallidum will reflex to RPR (rapid plasma regain) testing. If the RPR test is reactive, this suggests active, untreated syphilis. If the RPR is non-reactive, this suggests a past successfully treated syphilis infection. To rule out potential false positive results, we also perform the TPPA (Treponema pallidum particle agglutination assay) as a reflex test on Treponema pallidum IgG reactive and RPR non-reactive samples. In this situation, if the TPPA test is reactive this confirms the initial IgG screen and suggests past, successfully treated syphilis. If the TPPA test is non-reactive, this suggests that the initial IgG screen was falsely positive, although it does not rule out early Syphilis infections. If Syphilis is clinically suspected, a second specimen should be submitted at a later date.

Specimen Requirements

Collect: Serum – SST or RED TOP (4mL)
Patient Preparation: None
Storage/Transport/Stability: 7 days at 2-8°C, -20°C for longer term storage
Minimum volume: 0.5 mL serum; (absolute minimum)
Unacceptable Conditions: Samples other than serum, gross hemolysis

Reference Interval:
Syphilis IgG Ab: Nonreactive
RPR (if needed): Nonreactive
TPPA (if needed): Nonreactive

Routine Testing:
Performed in the Special Chemistry Laboratory at the Specialty Testing Center.
Syphilis IgG Ab: M-F dayshift
RPR (reflex test): Once per week on Friday
TPPA (reflex test): Once per week on Friday