
Lab Dept: Serology

Test Name: BRUCELLA ANTIBODY SCREEN, IGG/IGM

General Information

Lab Order Codes: BRUA

Synonyms: Brucella Serology; *Brucella melitensis*; *Brucella suis*

CPT Codes: 86622 X2 – Antibody; Brucella

86622 – Antibody, Brucella (additionally, confirmatory testing by bacterial agglutination, if appropriate)

Test Includes: Brucella IgG antibody, IgM antibody and Interpretation. Reported as positive, negative or equivocal. If Brucella antibody screen is positive or equivocal, Brucella Antibody by bacterial agglutination will be sent out for confirmatory testing at an additional charge.

Logistics

Test Indications: Useful for detection of antibodies in patients suspected of having brucellosis.

Lab Testing Sections: Serology - Sendouts

Referred to: Mayo Medical Laboratories (Test: BRCMG) and possible reflex (Test: BRUTA) for confirmatory testing.

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 1 – 3 days, test set up is Monday, Wednesday, Friday

Special Instructions: N/A

Specimen

Specimen Type: Blood

Container: SST (Gold, marble or red) tube

Draw Volume: 3 mL (Minimum: 1.2 mL) blood

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| Processed Volume: | 1 mL (Minimum: 0.4 mL) serum |
| Collection: | Routine blood collection |
| Special Processing: | Lab Staff: Centrifuge specimen, remove serum aliquot into a screw-capped round bottom vial. Store refrigerated. Ship refrigerated. Forward promptly. |
| Patient Preparation: | None |
| Sample Rejection: | Specimens other than serum; gross hemolysis; gross lipemia; mislabeled or unlabeled specimens |

Interpretive

Reference Range: IgG: Negative

IgM: Negative

Note: Results will be reported as Positive, Negative or Equivocal. If results are reported as positive or equivocal, reflex confirmatory testing will be performed by agglutination.

Reflex confirmatory titer: <1:80

Critical Values: N/A

Limitations:

This test utilizes antigen derived from *Brucella abortus* strain W99. However, significant cross-reactivity exists with other *Brucella* species and, therefore, the assays should not be used to differentiate infection at the species level.

Brucella canis, a rare cause of brucellosis, may not be detected by this method.

Detection of specific IgM or IgG-class antibody to *Brucella melitensis* and *Brucella suis* by this method has not been determined.

ELISA tests are intended to be used as a screen only. Positive results should be followed up using an agglutination assay for confirmation. Results must be used in conjunction with symptoms, patient history, and other clinical findings.

B abortus strain RB51 is used for vaccination of animals in the US. There are currently no serologic tests to detect an antibody response to strain RB51 in humans. Per CDC guidelines, routine clinical serology tests for *Brucella* do not detect an antibody response to strain RB51. Note that other strains besides RB51 may be used for vaccinating animals outside of the US.

Methodology:

Enzyme-Linked Immunosorbent (ELISA)
Confirmatory test: Direct Agglutination

References:

[Mayo Clinic Laboratory](#) July 2020

Updates:

12/16/03: New method implemented at Mayo. Previously Agglutination. New test separates out IgG and IgM determinations. Draw volume previously 1.5 mL.

5/11/2009: MML change in test # (previously 84327), and addition of reflex test to bacterial agglutination for positive/equivocal results.

11/16/2010: MML change to internal reflex testing, previously sent to ARUP.

12/22/2017: Collection container update.

7/14/2020: Updated collection volumes