

Brucella

General:

Brucella is a genus of Gram-negative bacteria, non-motile and encapsulated coccobacilli. Brucella is the cause of brucellosis, a true zoonotic disease. It is transmitted by ingesting infected food, direct contact with an infected animal, or inhalation of aerosols. Minimum infectious exposure is between 10 - 100 organisms.

There are a few different species of Brucella, each with slightly different host specificity. *B. melitensis* which infects goats and sheep, *B. abortus* which infects cows, *B. suis* infects pigs, *B. ovis* infects sheep and *B. neotomae*. Recently a new species was discovered in marine mammals: *B. pinnipediae*.

Human Brucellosis is not considered a contagious disease to other persons. Humans are infected by contact with fluids from infected animals (sheep, cows or pigs) or derived food products like unpasteurized milk and cheese. Brucellosis is also considered an occupational disease because it shows a higher incidence in persons working with animals (slaughterhouse cases).

Malta fever: *B. melitensis* was isolated from British soldiers who died from Malta fever in Malta. The disease is characterized by acute undulating fever, headache, night sweats, fatigue and anorexia.

Brucellosis is based on serological diagnosis for brucella IgM and IgG antibodies.

The following tests are available:

- **Brucella antibody screening[^]**

Indication: suspicion of past infection, fever of unknown origin, animal contact

Material: 1 ml serum

TAT: same day, FML

Method: Rose Bengal Agglutination

Units: Qualitative

Ref.- range: negative

- **Brucella DNA (B.abortus,B. suis, B. mellitensis)**

General:

Brucella spp.-PCR is useful in the diagnosis of primary infections, relapse, and focal complications of the disease as well as for identifying chronic brucellosis patients, especially those symptomatic nonfocal-disease patients for whom the classical methods of diagnosis fail.

Material: 1 ml serum

TAT: 5-7 days*

Method: PCR

Ref.- range: see report

- **Brucella IgG antibodies**

Indication: suspicion of past infection, fever of unknown origin, animal contact

Material: 1 ml serum

TAT: 5-7 days*

Method: EIA

Units: U/ml

Ref.- range: up to 20.0

- **Brucella IgM antibodies**

Indication: suspicion for recent brucellosis

Material: 1 ml serum

TAT: 5-7days*

Method: EIA

Units: U/ml

Ref.- range: up to 15.0

For complete list of laboratory test offered at Freiburg Medical Laboratory, please visit <http://www.fml-dubai.com/parameter-listings/>