

Dengue Fever Virus Antibodies, IgG and IgM

Test Highlights

Detects IgG and/or IgM antibodies against all four dengue fever virus serotypes.

Disease Overview

- Dengue fever is an acute, self-limiting, viral disease that is characterized by fever, headache, body pains, rash, lymphadenopathy, and prostration.
- In its most severe form, dengue hemorrhagic fever (DHF), infected patients will experience severe fever and renal failure, leading to the often fatal dengue shock syndrome (DSS).

Epidemiology

- Dengue fever (DF) is transmitted by the mosquito vectors *Aedes aegypti* and *Aedes albopictus* in tropical and subtropical regions of the Americas and Asia.
- Approximately two billion people are at risk for DF worldwide, and over one million people per year are infected.

Indications for Ordering

This test should be ordered if dengue fever virus is suspected.

Interpretation

- A positive result of >2.84 ISR indicates a detectable level of corresponding IgG or IgM antibodies.
- A result between 1.65 ISR and 2.84 ISR is considered equivocal, and repeat testing in 10–14 days may be helpful.
- A result of <1.65 is considered negative for anti-dengue fever virus antibodies.

Limitations

- This test has been validated for serum samples only; no other sample types may be used.
- Antibody testing has limited utility in patients who are HIV positive or otherwise immunocompromised.
- This test does not distinguish among the four virus serotypes.
- The peak of IgM antibodies does not occur before day 5–6 of infection. Therefore, this test is not usually useful in diagnosis of the disease during the critical phase.

Methodology

This test is performed using a standard ELISA method.

References

- Mandell G, Bennett J, Dolin R, eds. *Principles and Practice of Infectious Diseases*, 5th ed. New York: Churchill Livingstone, 2000.
- Dengue Fever Virus ELISA IgG and IgM. Package insert, InBios International Inc, 2008.
- Halstead SB. Dengue. *Lancet* 2007; 370(9599):1644–52.
- Potts JA, Rothman AL. Clinical and laboratory features that distinguish dengue from other febrile illnesses in endemic populations. *Trop Med Int Health* 2008; 13(11): 1328–40.
- Senanayake S. Dengue fever and dengue haemorrhagic fever—a diagnostic challenge. *Aust Fam Physician* 2006;35(8):609–12.

Test Information

0093097 **Dengue Fever Virus Antibody, IgG**
0093098 **Dengue Fever Virus Antibody, IgM**

For specific collection, transport, and testing information, refer to the ARUP Web site at www.aruplab.com.

For information on test selection, ordering, and interpretation, refer to ARUP Consult® at www.arupconsult.com.