

TEST ID: AHDV

HEPATITIS D VIRUS TOTAL ANTIBODIES, SERUM

USEFUL FOR

- ▶ Detection of hepatitis D virus (HDV)-specific total antibodies (combined IgG and IgM) in human serum
- ▶ Diagnosis of concurrent HDV infection in patients with acute hepatitis B virus (HBV) infection (acute coinfection), chronic HBV infection (chronic coinfection), or acute exacerbation of known chronic HBV infection (HDV superinfection)

CLINICAL INFORMATION

Hepatitis D virus (HDV), also known as delta hepatitis virus, is a defective RNA virus comprising of a delta antigen and a hepatitis B surface antigen (HBsAg) as the core and protein coat of the virus, respectively. This virus cannot replicate effectively by itself, and it requires the presence of hepatitis B virus (HBV) to initiate and maintain its replication in the infected liver cells.

Infection with HDV occurs either as an acute coinfection together with HBV or an acute superinfection of chronic HBV. Acute HBV-HDV coinfection usually follows a self-limited clinical course with spontaneous resolution, but may have a fulminant clinical presentation. HDV superinfection in chronic HBV or in HBV carrier state typically manifests as an acute exacerbation of chronic hepatitis B, with tendency to result in chronic HBV-HDV coinfection and early cirrhosis or liver failure. Chronic HDV infection is found in 1% of all chronically HBV-infected individuals in the United States.

Diagnosis of HDV can be established by detecting HDV antigen, HDV-specific IgM, or HDV-specific total antibodies (combined IgM and IgG) in the sera of infected patients with clinically evident acute or chronic hepatitis B. Anti-HDV IgM typically appears in serum at 2 to 3 weeks after onset of symptoms and disappears by 2 months after acute HDV infection, but it may persist up to 9 months in HDV superinfection. HDV IgG and HDV total antibodies persist in serum after resolution of acute HDV infection and in chronic coinfection.

REFERENCE VALUES

Negative

ANALYTIC TIME

1 day

SPECIMEN REQUIRED

Type

Serum

Collection Container/Tube

Preferred: Serum gel

Acceptable: Red top

Submission Container/Tube

Plastic vial

Specimen Volume

1 mL

HEPATITIS D VIRUS TOTAL ANTIBODIES, SERUM**INTERPRETATION**

This assay detects the presence of hepatitis D virus (HDV)-specific total (combined IgG and IgM) antibodies in serum.

Negative results indicate the absence of HDV infection and no past exposure to HDV.

Equivocal results indicate borderline level of anti-HDV total antibodies. Repeat testing in 1 to 2 weeks is recommended to determine the definitive HDV infection status.

Positive results usually indicate 1 of the following conditions: 1) simultaneous acute or chronic coinfection with hepatitis B virus (HBV) and HDV, 2) acute HDV infection in patients with known chronic HBV infection (ie, HDV superinfection), or 3) resolved HDV infection.

See the following in Special Instructions:

[Viral Hepatitis Serologic Profiles](#)

CLINICAL REFERENCE

1. Hughes SA, Wedemeyer H, Harrison PM: Hepatitis delta virus. *Lancet* 2011;378:73-85
2. Pascarella S, Negro F: Hepatitis D virus: an update. *Liver International* 2011;31(1):7-21
3. Olivero A, Smedile A: Hepatitis delta virus diagnosis. *Semin Liver Dis* 2012;32:220-227



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