

Hepatitis B

Serological test	Explanation of Serological test
Hepatitis B surface antigen	<p>Presence indicates current Hepatitis B infection</p> <p>Note:</p> <ol style="list-style-type: none">1) Does not differentiate between acute and chronic Hepatitis B without further tests or previous tests2) Usually the earliest detectable serum marker for acute Hepatitis B infection
Hepatitis B surface antibodies	<p>Presence indicates immunity to Hepatitis B infection</p> <p>Note:</p> <ol style="list-style-type: none">1) Does not differentiate between vaccine-induced immunity and immunity after recovery from Hepatitis B infection without further tests (especially Hepatitis B core total antibodies)2) Absolute levels may wane over time, particularly after immunisation, but does not necessarily mean loss of immunity (See <i>Australian Immunisation Handbook 8th Edition 2003</i>)
Hepatitis B core total antibodies <i>(detects the presence of both IgM and IgG antibodies to Hepatitis B)</i>	<p>Presence indicates current or past Hepatitis B infection</p> <p>Note:</p> <ol style="list-style-type: none">1) Does not differentiate between current or past Hepatitis B infection without tests, e.g. HBsAg, HepB core IgM2) NOT produced after Hepatitis B immunisation3) Usually remains positive life-long, but may wane4) May get isolated positive result:<ol style="list-style-type: none">(i) This usually means past infection with waning of Hepatitis B surface antibodies(ii) Occasionally this may be due to a non-specific (false positive) reaction(iii) Rarely this may be due to undetectable Hepatitis B surface antigen levels, and positive infectivity. If liver function tests are abnormal, consider HBV DNA testing
Hepatitis B core IgM antibodies	<p>Presence indicates recent acute Hepatitis B infection</p> <p>Note:</p> <ol style="list-style-type: none">1) Usually remains detectable for up to 6 months after acute Hepatitis B2) Occasionally seen in acute exacerbations of chronic Hepatitis B
Hepatitis B e antigen	<p>Presence indicates highly infective stage of Hepatitis B</p> <p>Note:</p> <ol style="list-style-type: none">1) May be negative in “pre-core mutant” form of Hepatitis B which is still highly infective - further tests, such as HBV DNA, may need to be performed to show high level on infectivity
Hepatitis B e antibody	<p>Limited use clinically</p> <p>Note:</p> <ol style="list-style-type: none">1) Level may become undetectable over time2) May be positive in “pre-core mutant” (see above, Hep B e antigen)

Hepatitis A

Serological test	Explanation of Serological test
Hepatitis A total antibody	Detects the presence of both IgM & IgG to Hepatitis A Presence indicates either: <ol style="list-style-type: none">1) Previous exposure to Hepatitis A2) Previous immunisation to Hepatitis A3) Recent/acute Hepatitis A (in the presence of positive Hepatitis A IgM antibodies)
Hepatitis A IgM antibodies	Presence indicates acute Hepatitis A Note: <ol style="list-style-type: none">1) Occasional false-positives due to cross reactions from other infections2) May not always be detectable at onset of illness - may need to repeat HepA IgM 7 days after initial negative result if still highly suspicious for acute Hepatitis A3) Usually remains detectable for 2-4 months (up to 6 months) after acute infection

Hepatitis C

Serological test	Explanation of Serological test
Hepatitis C antibodies	Presence indicates current or past Hepatitis C infection . Note: <ol style="list-style-type: none">1) Does not differentiate between acute, chronic or resolved infection2) May not be detectable for up to 3 months after acute exposure (incubation period) - repeat testing recommended (or HepC PCR) if highly suspicious for Hepatitis C infection despite initial negative HepC Ab result3) False-positive reactions are common and require supplementary tests to resolve4) Positive reactions require a second Hepatitis C antibody test to confirm the findings of an initial positive test (this is a <u>different</u> test to the initial screening test)
Hepatitis C RNA polymerase chain reaction (PCR)	Presence indicates actively replicating Hepatitis C virus - the test detects viral RNA Note: <ol style="list-style-type: none">1) Levels may vary with time, giving discrepant PCR results over time in the absence of Hepatitis C therapy2) Absence in a single test does NOT necessarily indicate resolution of infection3) Repeated testing is mainly used to follow efficacy of anti-Hepatitis C therapy

For further information please contact our Microbiologists on (07) 3121 4444.