

Assignment: Immunology and Serology

Name : Syed Junaid Anwar

ID: 14049

An antibody titer is a measurement of how much antibody an organism has produced that recognizes a particular epitope, expressed as the inverse of the greatest dilution (in a serial dilution) that still gives a positive result. ELISA is a common means of determining antibody titers.

For example, the indirect Coombs test detects the presence of anti-Rh antibodies in a pregnant woman's blood serum. A patient might be reported to have an "indirect Coombs titer" of 16. This means that the patient's serum gives a positive indirect Coombs test at any dilution down to 1/16 (1 part serum to 15 parts diluent). At greater dilutions the indirect Coombs test is negative. If a few weeks later the same patient had an indirect Coombs titer of 32 (1/32 dilution which is 1 part serum to 31 parts diluent), this would mean that she was making more anti-Rh antibody, since it took a greater dilution to abolish the positive test.

Many traditional serological tests such as hemagglutination or complement fixation employ this principle. Such tests can typically be read visually, which makes them fast and cost-effective in a "low-tech" environment. The interpretation of serological titers is guided by reference values that are specific to the antigen or antibody in question; a titer of 1:32 may be below the cut-off for one test but above for another.

Antistreptolysin O (ASO) titer is a blood test to measure antibodies against streptolysin O, a substance produced by group A streptococcus bacteria. Antibodies are proteins our bodies produce when they detect harmful substances, such as bacteria.