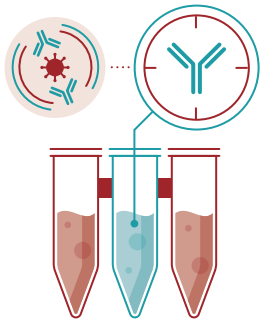


GET TO KNOW SEROLOGY TESTING FOR INFECTIOUS DISEASES

Serology tests detect evidence of the body's **immune response** to infectious diseases.

WHAT CAN A SEROLOGY TEST TELL US?

If a patient has developed antibodies after exposure to a pathogen

Proteins created by the immune system to fight off current infections and recognize pathogens in the future

The presence of different antibodies can help identify the stage of the infection

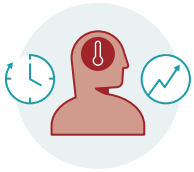
IgM: The first antibodies produced after exposure to a pathogen

Short-lived; detectable during an ***active*** or ***recent*** infection

IgG: More specific antibodies, produced in the later stages of an infection that can recognize the same pathogen in the future and respond

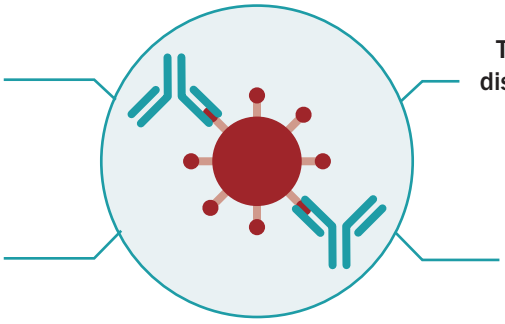
Long-lasting; can indicate a ***past*** infection

HOW CAN A SEROLOGY TEST BE USED?



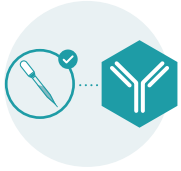
To detect infections with a short active period in the body

To identify people with current asymptomatic or past infections



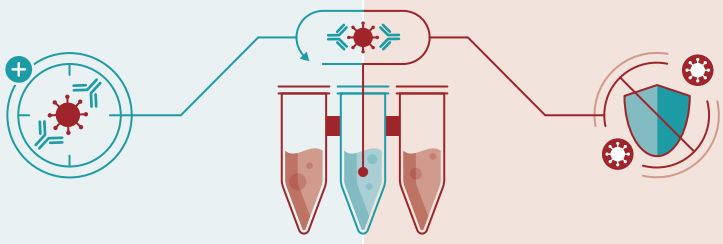
To confirm diagnosis for diseases that are difficult to detect directly

To confirm whether a vaccine has produced an immune response



A POSITIVE SEROLOGY TEST

Means	Does not mean
A person has developed an immune response to a **current** or **past** infection	A person is fully immune to **future** infections



A CLOSER LOOK: HOW SEROLOGY TESTS WORK

Serology tests detect antibodies in a patient sample (e.g., blood). There are different serology methods and many use color or florescence to visualize the result.

Patient sample

+

Test device containing a specific antigen

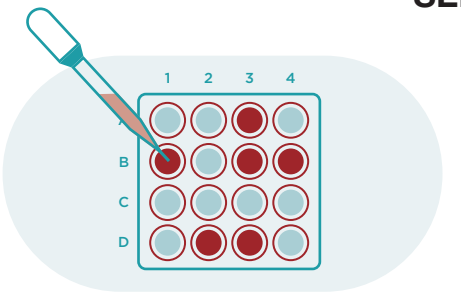
A protein on the surface of a pathogen that provokes an immune response

=

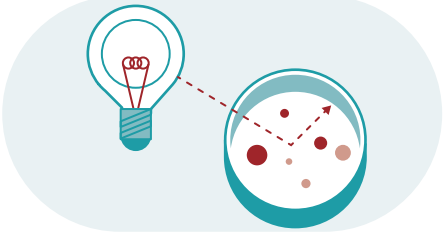
Antibody response

Positive result: If sample contains target antibodies, they will bind to the antigen

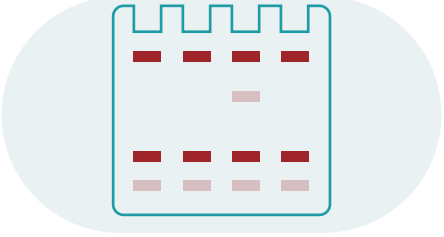
SEROLOGY TESTING TECHNIQUES



Enzyme-linked immunosorbent assay (EIA)

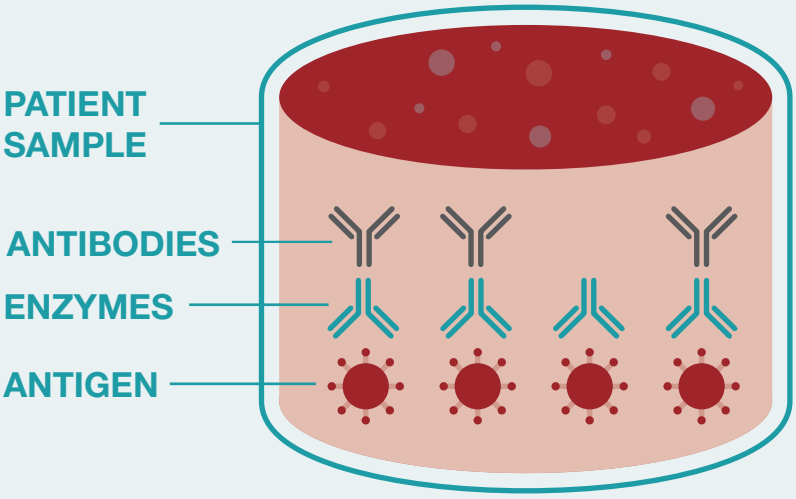


Direct fluorescent antibody (DFA) testing



Western blot

HOW EIA WORKS



If present, the patient's **antibodies** will bind to the **antigen** and create a colorful reaction with the **enzyme**

More color = Higher level of antibodies in the sample

APHL™

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Sources:

- **MedlinePlus:** medlineplus.gov/ency/article/003332.htm
- **UCLA Health:** www.uclahealth.org/antibody-serology-testing

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