



Knowing now matters.™

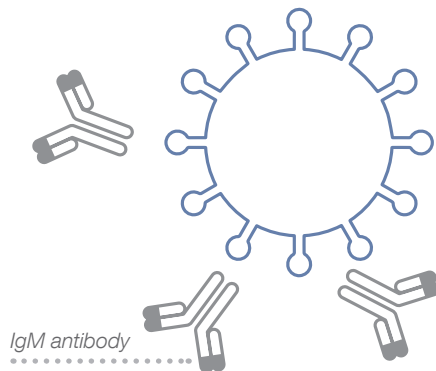
HIV Immune Response: Antigen & Antibodies

Antigens are foreign substances, such as bacteria and viruses, which trigger an immune response in the body, specifically the production of antibodies. Antibodies are produced by the immune system to fight antigens such as HIV. There are two main types of antibodies produced by the human body to fight HIV: IgM and IgG.

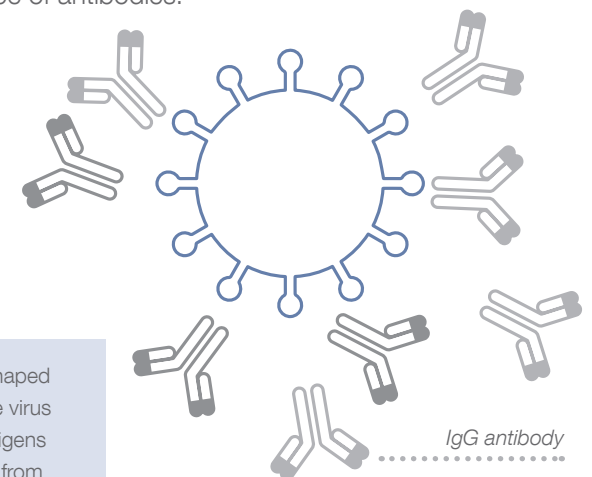
HIV enters the body and begins to multiply, increasing the HIV-1 p24 antigen.



The body detects HIV and produces antibodies. The first to appear is IgM. IgM antibodies are found in lymph fluid and blood and are produced after the body has detected an HIV infection.



IgG antibodies appear last after an HIV infection has been detected by the body. IgG antibodies are found in all bodily fluids and are the most common type of antibodies.



Antibodies are the Y-shaped proteins that attack the virus by attaching to the antigens and stopping the virus from multiplying.

HIV tests by generation¹

4th Generation Rapid

Detects IgM and IgG antibodies, and free HIV-1 p24 antigen

- Alere Determine™ HIV-1/2 Ag/Ab Combo

3rd Generation

Detects IgM and IgG antibodies

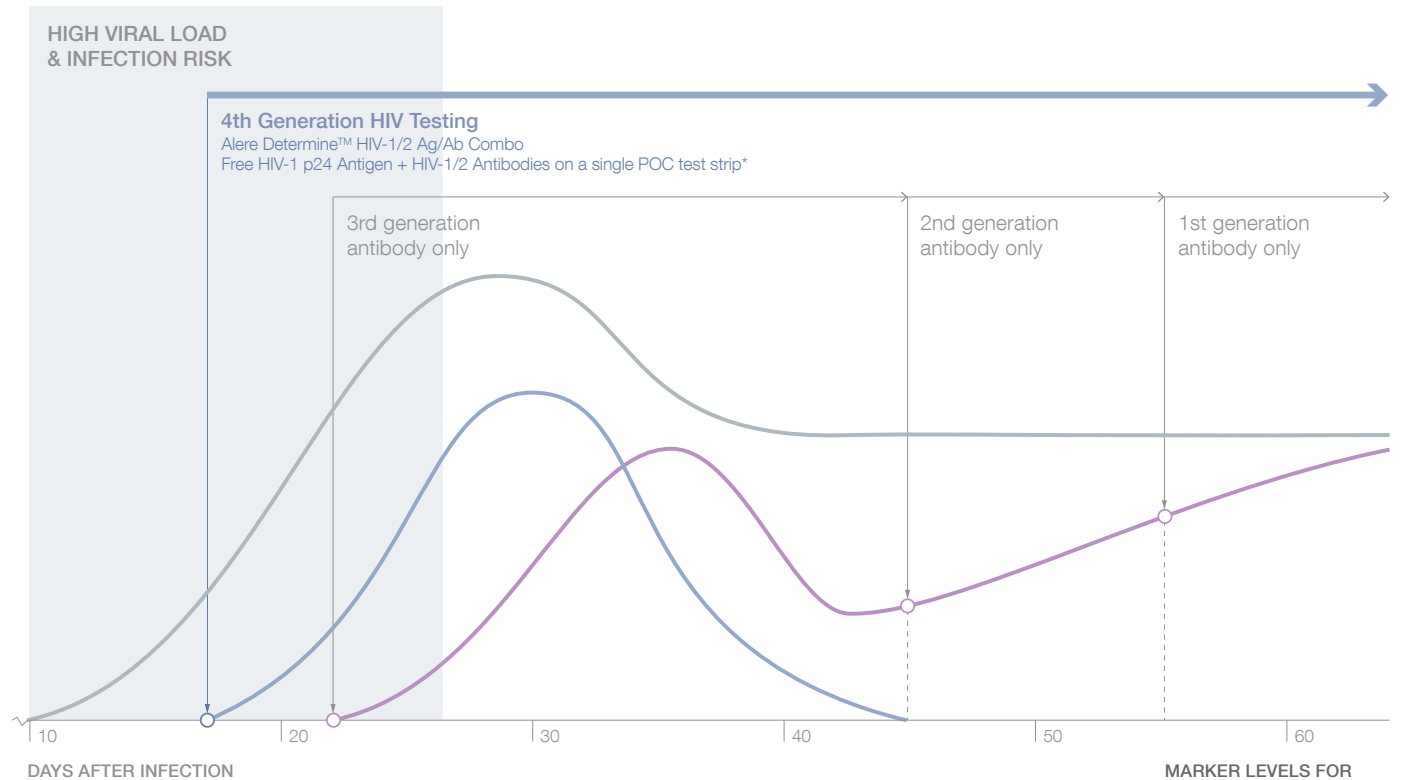
- Abbott HIV AB HIV-1/HIV-2 (rDNA) EIA
- GS HIV-1/HIV-2 PLUS O EIA
- ADVIA Centaur® HIV 1/O/2 Enhanced Assay
- Uni-gold™ Recombigen® HIV-1/2
- INSTI™ HIV-1/HIV-2 Ab Test

2nd Generation

Detects IgG antibodies

- OraQuick ADVANCE® Rapid HIV-1/2 Antibody Test
- Chembio HIV 1/2 STAT-PAK®
- BioRad Multispot HIV-1/HIV-2 Rapid Test
- Medmira Reveal® G3
- Chembio DPP® HIV 1/2 Assay
- Chembio SURE CHECK® HIV 1/2 Assay

HIV detection by generation



* Not comparable to molecular testing

Modified from:

Fiebig EW, Wright DJ, Rawal BD, et al. Dynamics of HIV viremia and antibody seroconversion in plasma donors: implications for diagnosis and staging of primary HIV infection. AIDS. 2003;17(13):1871-1879.

and

Patel P, Mackellar D, Simmons P, et al. Detecting acute human immunodeficiency virus infection using 3 different screening immunoassays and nucleic acid amplification testing for human immunodeficiency virus RNA, 2006-20 08. Arch Intern Med. 2010;170(1):66-74. doi:10.1001/archinternmed.2009.445.

1. CDC. Advantages and disadvantages of FDA-approved HIV immunoassays used for screening by test format and CLIA complexity updated. (2015, October 28). Retrieved from <https://www.cdc.gov/hiv/pdf/testing/hiv-testsadvantages-disadvantages.pdf>