B Cells

B cells produce antibodies that attack the virus.\(^2\)

It can take 2-3 weeks to develop enough antibodies to be detected in an antibody test.\(^4\)

Antibodies may wane over time.\(^7\)

Using a sample of blood, antibody levels are measured.\(^7\)

T Cells

T cells are the first responders to any infection and signal to B cells to produce antibodies.\(^1\)

T cells typically appear 3-5 days after a new infection.\(^5\)

T cells can persist in the body for several months.\(^6,14\)

T cells specific to the virus can be detected and quantified from a small sample of blood—clinical tests are under development.\(^8\)

A positive test result indicates past infection with the virus.\(^5,6\)

A positive test result indicates likely past infection with the virus. However, some people never develop antibodies and antibodies fade over time, past infections can be missed.\(^8\)

A positive test result indicates past infection with the virus.\(^10\)

Role in Fighting COVID-19

Time from Infection to Appearance

Persistence

Testing Method

What Test Results Mean

T Cell Takeaways

T-cell testing adds a critical dimension to how we measure immunity of an individual or population and has shown to be more sensitive than antibody testing in a real-world setting.\(^9\)

T cells can provide insight into which specific parts of the virus induce an immune response, which could contribute to the next generation of vaccines or therapeutics.\(^5\)

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5Dan JM, et al. Immunological memory to SARS-CoV-2 assessed for greater than six months after infection. bioRxiv. doi: https://doi.org/10.1101/2020.11.15.383323.


