Completing the picture

of the SARS-CoV-2 immune response

QuantiFERON® SARS-CoV-2

Sample to Insight

T cell detection is a new tool in the fight against COVID-19

To protect patients from COVID-19, we must first understand and control the infection. Cell-mediated immunity (CMI) is an enduring and reliable marker of the adaptive immune response after COVID-19 vaccination. T-cell immunity may be a more sensitive way to detect immune responses to SARS-CoV-2 than serological assays.

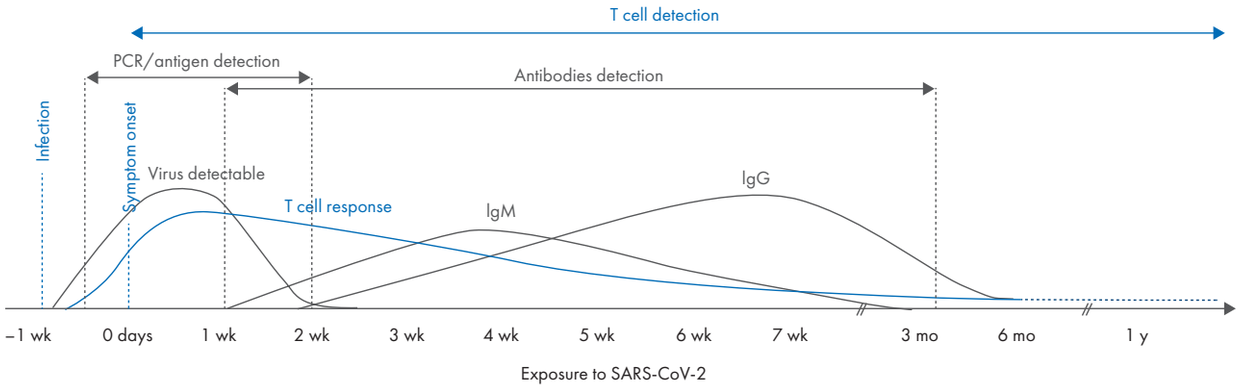


Figure 1. T cells are generated shortly after infection, vaccination, or after re-exposure.
T-cell immune response is detectable as early as the acute phase of infection and can be stimulated and detected even when levels of antibodies are low or undetectable (1–4).

Completing the picture of the SARS-CoV-2 immune response

QuantiFERON SARS-CoV-2 features trusted QuantiFERON technology to measure cell-mediated immune response after SARS-CoV-2 vaccination.

- Leverages reliable, established QuantiFERON IGRA workflow
- Highly specific CD4 and CD8 T-cell responses
- Flexible workflow: up to 53 hours available from sample collection to incubation
- CE-marked

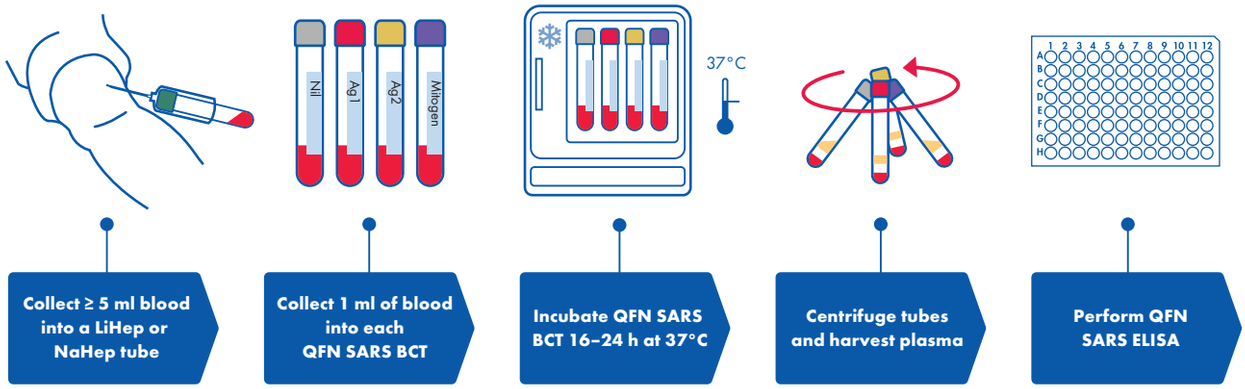
Trusted QuantiFERON technology

QuantiFERON SARS-CoV-2 (QFN SARS) is a qualitative assay that uses specialized blood collection tubes, containing peptide antigens that stimulate immune cells using SARS-CoV-2 specific proteins. Whole blood is collected into each of the QFN SARS Blood Collection Tubes, which include a Nil tube, Ag1 tube, Ag2 tube and Mitogen tube.

- Nil (grey cap / white ring) – negative control for background and nonspecific IFN-γ in blood
- Ag1 (red cap / white ring) – stimulation of SARS-CoV-2 specific CD4 T cells
- Ag2 (ochre cap / white ring) – stimulation of SARS-CoV-2 specific CD4 and CD8 T cells
- Mitogen (purple cap / white ring) – IFN-γ positive control

Flexible workflow

Blood can be drawn directly into the QFN SARS Blood Collection Tubes or into a single Lithium- or Sodium-heparin tube, allowing up to 53 hours available from sample collection to incubation.



Reliable results

The amount of IFN-γ produced in response to SARS-CoV-2-specific T-cell stimulation is measured using enzyme-linked immunosorbent assay (ELISA). Results can be calculated using optional QuantiFERON SARS-CoV-2 software.

Table 1. Results interpretation

Nil (IU/ml)	Ag1 Antigen minus Nil (IU/ml)	Ag2 Antigen minus Nil (IU/ml)	Mitogen minus Nil (IU/ml)	QFN SARS result	Report/ Interpretation
≤8.0	≥0.15 and ≥25% of Nil	Any	Any	Reactive	*SARS-CoV-2 response detected*
	Any	≥0.15 and ≥25% of Nil			
	<0.15 or ≥0.15 and <25% of Nil	<0.15 or ≥0.15 and <25% of Nil	≥0.50	Non-reactive	*SARS-CoV-2 response NOT detected*
	<0.15 or ≥0.15 and <25% of Nil	<0.15 or ≥0.15 and <25% of Nil	<0.50	Indeter-minate	*SARS-CoV-2 response and Mitogen cannot be detected*
≥8.0	Any				

For detailed results interpretation, consult the QuantiFERON SARS-CoV-2 ELISA Kit Instructions for Use

Ordering Information

Product	Contents	Cat. no.
QuantiFERON SARS-CoV-2 Blood Collection Tubes	200 tubes (50 each Nil, Ag1, Ag2 and Mitogen)	626725
QuantiFERON SARS-CoV-2 ELISA Kit	2-plate ELISA kit	626420

References

1. Stephens, D.S. and McElrath, M. J. (2020) COVID-19 and the path to immunity. JAMA **324**, 1279–1281.
2. Sekine, T. et al. (2020) Robust T cell immunity in convalescent individuals with asymptomatic or mild COVID-19. Cell **183**, 158–168.
3. Zuo, J. et al. (2021) Robust SARS-CoV-2-specific T cell immunity is maintained at 6 months following primary infection. Nat. Immun. **22**, 620–626.
4. Ibarrondo, F.J. et al. (2020) Rapid decay of anti-SARS-CoV-2 antibodies in persons with mild Covid-19. N. Engl. J. Med. **383**, 1085–1087.

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit instructions for use or user operator manual. QIAGEN instructions for use and user manuals are available at www.qiagen.com or can be requested from QIAGEN Technical Services (or your local distributor).

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