



QuantiFERON® SARS-CoV-2

## Completing the picture

of the SARS-CoV-2 immune response

## 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 past exposure and monitor post vaccine immunity to SARS-CoV-2 than serological assays.

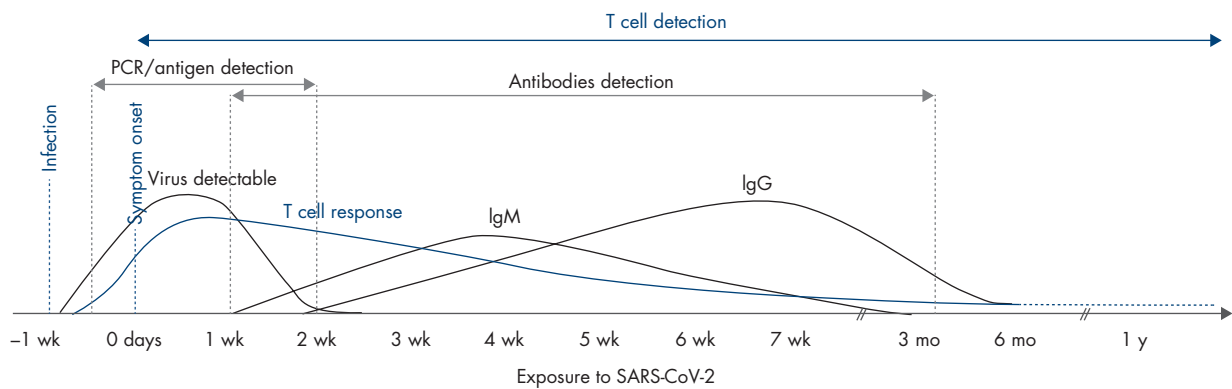


Figure 1. T cells are generated shortly after infection, vaccination, or after re-exposure. T cell immune response is detectable as early as the acute phase of infection and can be stimulated and detected even when levels of antibodies are low or undetectable (1–4).

## 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-IVD marked



## Trusted QuantiFERON technology

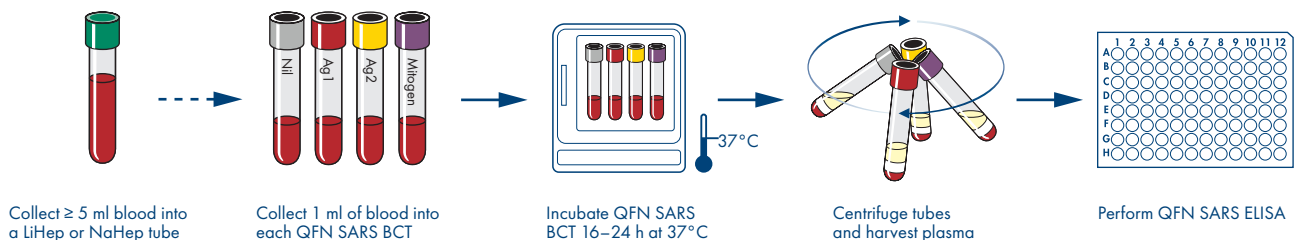
QuantiFERON SARS-CoV-2 (QFN SARS) is a qualitative assay that uses specialized blood collection tubes, containing peptide antigens that stimulate immune cells using SARS-CoV-2 specific proteins. Whole blood is collected into each of the QFN SARS Blood Collection Tubes, which include a Nil tube, Ag1 tube,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

- Nil (grey cap / white ring) – negative control for background and nonspecific IFN- $\gamma$  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- $\gamma$  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- $\gamma$  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	Indeterminate	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

 Learn more at [www.QIAGEN.com/QFN-SARS](http://www.QIAGEN.com/QFN-SARS)

### References

- Stephens, D.S. and McElrath, M. J. (2020) COVID-19 and the path to immunity. *JAMA* **324**, 1279–1281.
- Sekine, T. et al. (2020) Robust T cell immunity in convalescent individuals with asymptomatic or mild COVID-19. *Cell* **183**, 158–168.
- 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.
- 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.

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