



Maximize T cell immune
response research insights

QuantiFERON[®] SARS-CoV-2 RUO

Fighting COVID-19 begins with research

To control the pandemic, we must first understand and control the infection. Exploration of immune response markers in SARS-CoV-2 infections is emerging as the next research tool as T cells are becoming increasingly recognized for their role in COVID-19 immunity (1–4).

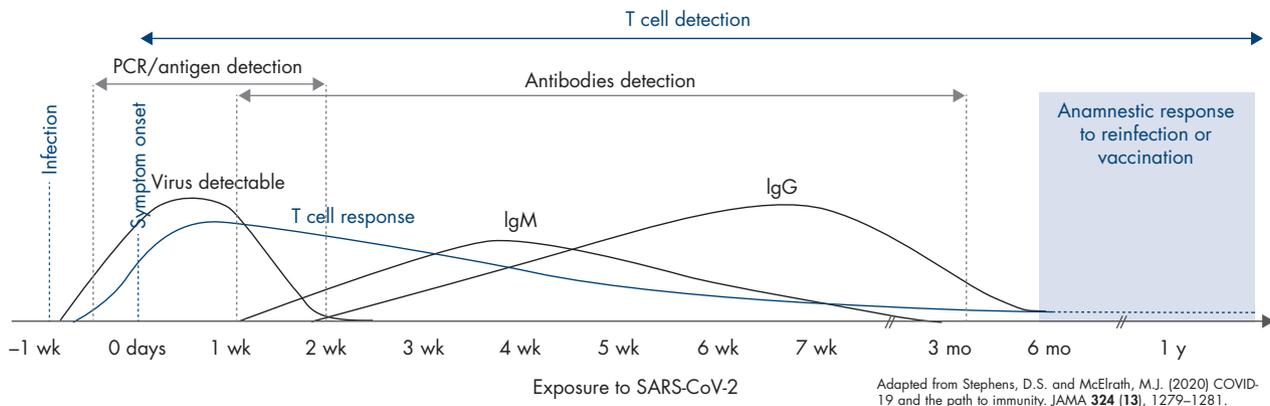


Figure 1. T cells are generated shortly after infection, vaccination, or after re-exposure. T cell immune response is detectable as early as the acute phase of infection and can be stimulated and detected even when levels of antibodies are low or undetectable (2, 7).

Researching immunity to advance our response to SARS-CoV-2

Numerous publications and recent research (1–7) highlight the potential applications of immune response assays in COVID-19 infections, such as, but not limited to:

- Researching immunity in at-risk populations to possibly aid in vaccine prioritization or determination of vaccine efficacy
- Researching infection severity in hospitalized COVID-19 patients
- Researching COVID-19 outcomes in hospitalized/ICU patients

Key research highlights

Immune response investigations, covering specific and non-specific SARS-CoV-2 T cell response, for both innate and adaptive immune systems can provide valuable insights. Such research could help identify pathways to potential COVID-19 management improvements among severely ill hospitalized COVID-19 patients and individuals admitted to Intensive Care Units (ICUs) (5–7).

Additionally, investigating immunity in at-risk populations may possibly help with vaccine prioritization and vaccination efficiency assessment.

QuantiFERON® SARS-CoV-2 RUO enables comprehensive research of immune response in SARS-CoV-2 infected patients, allowing you to advance your research and improve our understanding of COVID-19.

Easily assess cell-mediated immune response to SARS-CoV-2 infection

QIAGEN is widely committed in the fight against COVID-19: now you can count on QuantiFERON's world-leading IGRA technology to support your research and fight this pandemic.

QuantiFERON SARS-CoV-2 RUO solution is an original combination of blood collection tubes containing innovative specific peptides formulated to stimulate lymphocytes in heparinized whole blood involved in cell-mediated immunity. Plasma from the stimulated samples can then be used for detection of IFN- γ using a simple ELISA.



Customizable and innovative components for comprehensive immune response investigation

The QuantiFERON SARS-CoV-2 RUO solution is composed of several components that can be ordered separately or combined to maximize T cell immune response research insights.

Blood collection tube	Starter Set	Extended Set*	Monitor Direct
Description	The easy way to START SARS-CoV-2 immune response investigation	Additional peptides to EXTEND immune response research on SARS-CoV-2	EVALUATE immune response; now simply in a tube
Content	Original SARS-CoV-2 spike peptides formulation for specific CD4 and CD4 + CD8 stimulation	Innovative selection of 28 immunodominant specific peptides covering the full genome of the SARS-CoV-2 virus	Dedicated blood collection tubes containing peptides stimulating both innate and adaptive immune response
Research area related to vaccination	<ul style="list-style-type: none"> • Research previous exposure and/or when there are low/undetectable levels of antibodies • Research vaccination priority in risk groups • Research immunity and vaccination efficacy 	<ul style="list-style-type: none"> • In addition to Starter Set, enhance research on previous exposure and/or when there are low/undetectable levels of antibodies • Maximize research in vaccination efficacy for non-spike-based-only vaccines 	
Research area related to patient management	<ul style="list-style-type: none"> • Research previous exposure and/or when there are low/undetectable levels of antibodies 	<ul style="list-style-type: none"> • Complementary to Starter Set: maximize detection capabilities by stimulating multiple antigenic targets 	<ul style="list-style-type: none"> • Research IFN-γ kinetics in SARS-CoV-2 infection • Helps research on COVID-19 severity assessment • Helps research on COVID-19 outcomes in hospitalized patients

* In development (Q1 2021).

Ordering Information

Product*	Contents	Cat. no.
QuantiFERON Control Set	Negative and positive controls; 100 Nil Tube (2 x 50/rack); 100 Mitogen Tube (2 x 50/rack)	626015
QuantiFERON SARS-CoV-2 Starter Pack	Starter Set (cat. no. 626115) plus Control Set (cat. no. 626015) Starter Set: Spike-specific peptide pool for general assessment of the SARS-CoV-2 immune response; 100 QF-SARS-CoV-2 Ag1 Tube (2 x 50/rack); 100 QF-SARS-CoV-2 Ag2 Tube (2 x 50/rack) Control Set: Negative and positive controls; 100 Nil Tube (2 x 50/rack); 100 Mitogen Tube (2 x 50/rack)	626715
QuantiFERON Monitor Direct	Blood collection tubes containing specialized stimulants for the detection of both innate and adaptive immune response; 100 QFN Monitor Direct Tube (2 x 50/rack)	626315
QuantiFERON ELISA	ELISA microplate for the dosage of IFN- γ ; Microplate Strips; IFN-gamma Standard, lyophilized; Green Diluent; Conjugate 100x Concentrate, lyophilized; Wash Buffer 20x Concentrate; Enzyme Substrate Solution; Enzyme Stopping Solution (2 x ELISA plates)	626410

References

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3. Sauer, K. and Harris, T. (2020) An Effective COVID-19 vaccine needs to engage T cells. *Front Immunol* **11**, 2371.
4. Murugesan, K. et al., (2020) Interferon-gamma release assay for accurate detection of SARS-CoV-2 T cell response. *Clin Infect Dis*, ciaa1537, <https://doi.org/10.1093/cid/ciaa1537>
5. Petrone, L., et al., (2020) A whole blood test to measure SARS-CoV-2 specific response in COVID-19 patients. *Clin Microbiol Infect* <https://doi.org/10.1016/j.cmi.2020.09.051>.
6. Payen, D. et al., (2020) A longitudinal study of immune cells in severe COVID-19 patients. *Front Immunol* **11**:580250. doi: 10.3389/fimmu.2020.580250
7. Koblichke, M. et al., (2020) Dynamics of CD4 T cell and antibody responses in COVID-19 patients with different disease severity. *Front Med* **7**:592629. doi: 10.3389/fmed.2020.592629

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