Efficient and reliable mass testing of recent COVID-19 infection

Actim

Actim ELISA SARS-CoV-2 IgG

Actim ELISA SARS-CoV-2 IgG | Technical specs

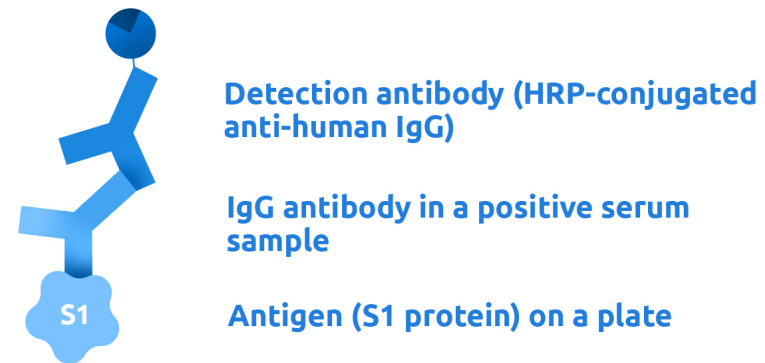# Actim ELISA SARS-CoV-2 IgG

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- Actim ELISA SARS-CoV-2 IgG is a serological antibody detection test

- The test is intended for professional use to help detect **recent** COVID-19 infection

- The quantitative test detects **IgG** specific to SARS-CoV-2

- The test is developed and produced in Finland

Actim® ELISA SARS-CoV-2 IgG

- **40** replicates or **80** single samples can be run in one plate.

- Sample type is **serum** from venous blood.

- Test results are available in **less than two hours.**

- Test kit contains **all reagents** needed for testing

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The detection of antibodies against SARS-CoV-2 virus

- Actim ELISA SARS-CoV-2 IgG is an enzyme-linked immunosorbent assay (ELISA)

- The test measures the specific IgG antibodies against the spike glycoprotein S1 (S1 protein) found on the surface of the SARS-CoV-2 virus

- The antibodies in a positive serum sample bind with high specificity to the test plate coated with SARS-CoV-2 S1 proteins

Detection antibody (HRP-conjugated anti-human IgG)

IgG antibody in a positive serum sample

Antigen (S1 protein) on a plate

S1

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IgG is the most useful marker to detect recent COVID-19 infection

- As a second line of antibody defense, levels of IgG **rise quickly** (1 week) and **stays high** for several months after the onset of infection

- First line of antibody defense starts rising a few days earlier but drops in one month

- **Quantitative** detection of IgG provides comprehensive information on individual's immune response

Antigen

IgG

Acute phase

Post-infection

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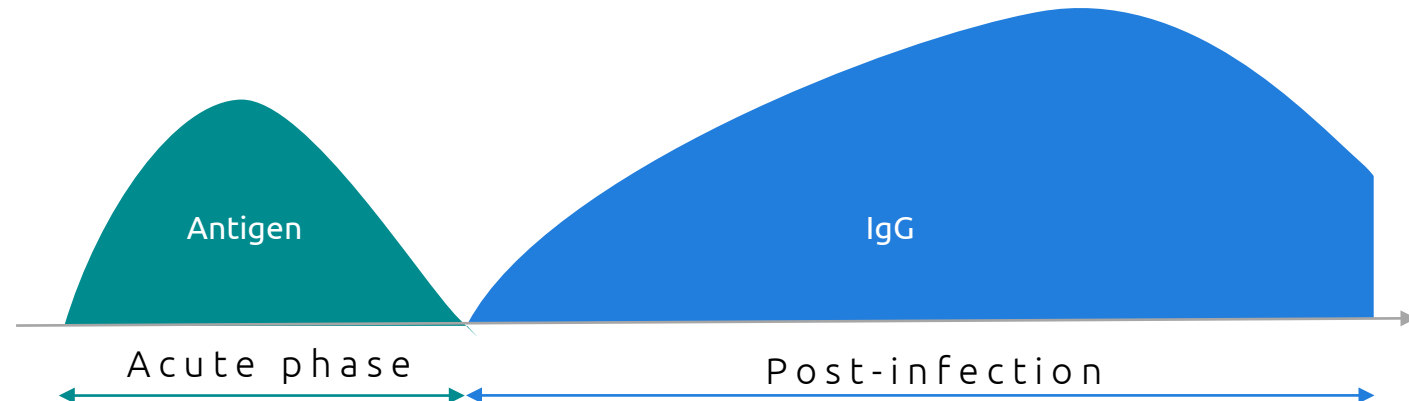
First-class performance

Excellent performance of Actim ELISA SARS-CoV-2 IgG compared to RT-PCR in analysis of total 670 serum samples (≥ 7 days after PRC sampling, n=639).

Actim ELISA SARS-COV-2 IgG	PCR pos	PCR neg
Pos	73	8
Neg	3	555

Excellent performance of Actim ELISA-SARS-CoV-2 IgG	
Sensitivity	96%
Specificity	98%
PPV	87%
NPV	99%
Accuracy	98%

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Best-in-class sensitivity

Actim ELISA SARS-CoV-2 IgG is one of the most reliable tests in the market (n=50 positive and 50 negative).

| Method	Sensitivity
Actim ELISA SARS-CoV-2 IgG S1	96%
ELISA IgG, Competitor A	70%
ELISA IgG, Competitor B	72%
ELISA IgG, Competitor C	80%

Highly specific to SARS-CoVs

Actim ELISA SARS-CoV-2 IgG test does not cross-react with IgG antibodies against 16 other viruses.

The evaluation was made with 90 human serum samples collected before the COVID-19 pandemic

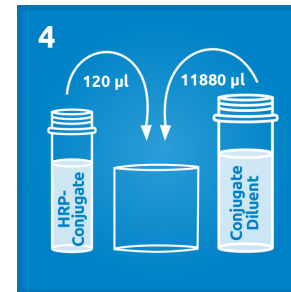|		
Adenovirus	Mumps virus (parotitis)	Varicella zoster virus
Cytomegalovirus (CMV)	Mycoplasma pneumoniae	Epstein-Barr virus
Herpes simplex viruses 1+2	Parainfluenza viruses 1/2/3	Enteroviruses
Influenza virus Type A	Parvovirus B19	Measles virus
Influenza virus Type B	Respiratory syncytial virus	Hantavirus Pool 1 "Eurasia"
		Haemophilus influenzae B

Quantitative results in less than 2 hours

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1

Mix all reagents gently

2

40 ml

25x Wash Solution

960 ml Distilled water
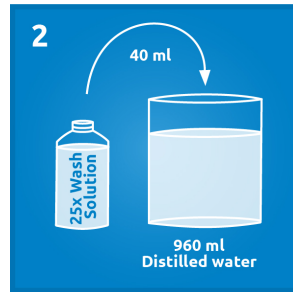
Dilute Wash Solution to a final volume

3

10 µl

490 µl

Sample Diluent

Samples / Controls / Calibrators
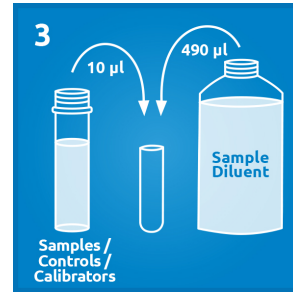
Dilute Samples, Controls, and Calibrators

4

120 µl

11880 µl

HRP-Conjugate

Conjugate Diluent

Dilute HRP-Conjugate in Conjugate Diluent

5

30 min

100 µl

Diluted Samples / Controls / Calibrators
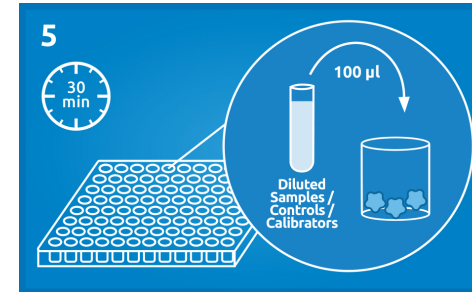
Add diluted Samples/ Controls/ Calibrators to appropriate wells and incubate the plate

6

2x

350 µl

Wash Solution

Wash the plate twice

7

30 min

100 µl

Diluted HRP-Conjugate
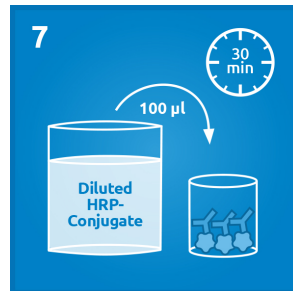
Add diluted HRP-Conjugate to each well and incubate the plate

8

6x

350 µl
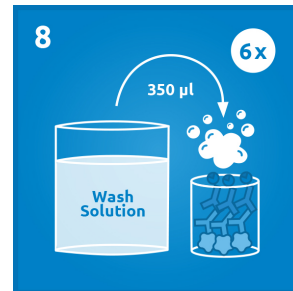
Wash Solution

Wash the plate six times

9

100 µl

10 min
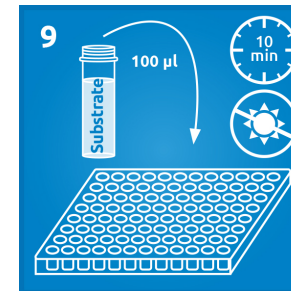
Substrate

Add Substrate to each well and incubate the plate

10

100 µl

5 sec
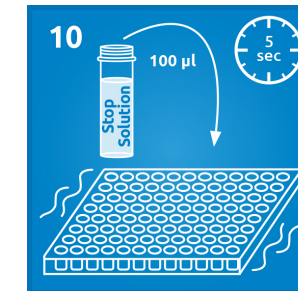
Stop Solution

Add Stop Solution to each well
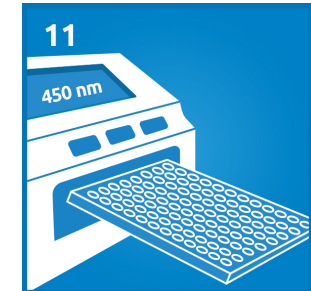
11

450 nm

Read the plate at 450 nm

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Contact us!

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