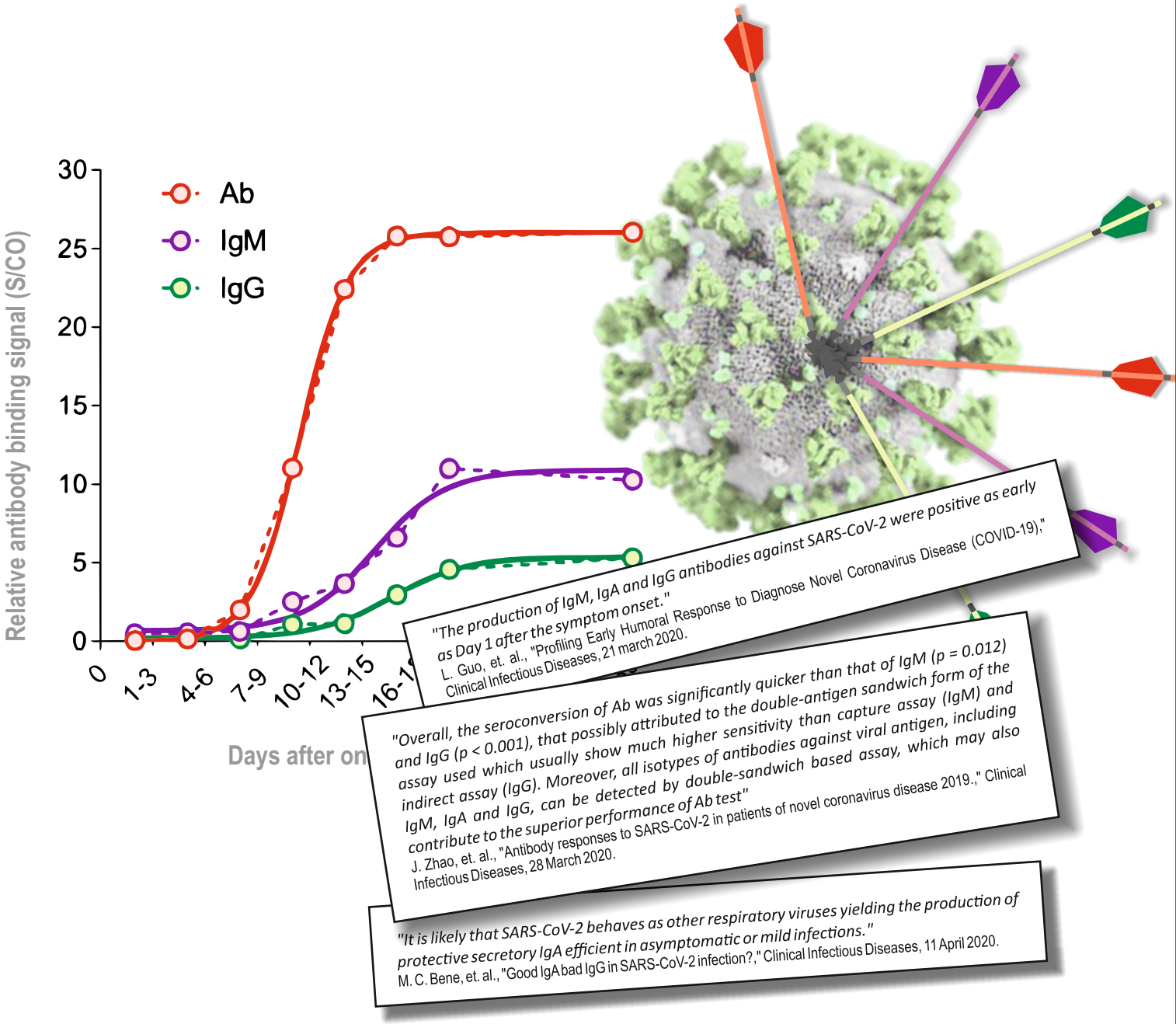
Early detection of COVID-19

with Third Generation *Assay*



"The production of IgM, IgA and IgG antibodies against SARS-CoV-2 were positive as early as Day 1 after the symptom onset."
L. Guo, et. al., "Profiling Early Humoral Response to Diagnose Novel Coronavirus Disease (COVID-19)," Clinical Infectious Diseases, 21 march 2020.

"Overall, the seroconversion of Ab was significantly quicker than that of IgM ($p = 0.012$) and IgG ($p < 0.001$), that possibly attributed to the double-antigen sandwich form of the assay used which usually show much higher sensitivity than capture assay (IgM) and indirect assay (IgG). Moreover, all isotypes of antibodies against viral antigen, including IgM, IgA and IgG, can be detected by double-sandwich based assay, which may also contribute to the superior performance of Ab test"
J. Zhao, et. al., "Antibody responses to SARS-CoV-2 in patients of novel coronavirus disease 2019.," Clinical Infectious Diseases, 28 March 2020.

"It is likely that SARS-CoV-2 behaves as other respiratory viruses yielding the production of protective secretory IgA efficient in asymptomatic or mild infections."
M. C. Bene, et. al., "Good IgA bad IgG in SARS-CoV-2 infection?," Clinical Infectious Diseases, 11 April 2020.

Coviscreen™

Double Antigen Assay for IgM + IgG + IgA Detection

Early Detection ● High Sensitivity ● High Specificity

CE

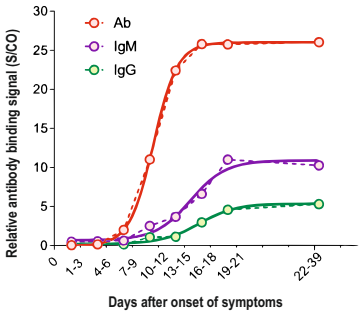
Coviscreen™

Rapid Double Antigen Screening test for the detection of IgM/IgG/IgA antibodies to COVID-19 in human serum/plasma/whole blood

Coronavirus, was initially named as the 2019- novel coronavirus (SARS CoV 2) on January 2020 by World Health Organization (WHO). WHO officially named the disease as coronavirus disease 2019 i.e. COVID-19. Transmission occurs primarily via respiratory droplets from coughs and sneezes within a range of about 1.8 metres (6 ft). Indirect contact via contaminated surfaces is another cause of infection.

In densely populated demography, social isolation of the people is the only way to break the infection chain of COVID-19 infection. So, mass level testing plays a critical role to identify infected and possible infected people and isolate them to break the transmission chain of this contagious disease to stop this pandemic.

During the COVID-19 infection, various studies have shown that IgM and IgG class of antibodies can be detected almost simultaneously in the early phase of infection. There seems to be a very strong evidence that the measurement of IgA levels in patients would be of great value in the diagnosis of the SARS-CoV-2 infection. Therefore detection of total antibodies (IgA+IgM+IgG) ensures sensitive detection of the infection that is important for epidemiological screening.

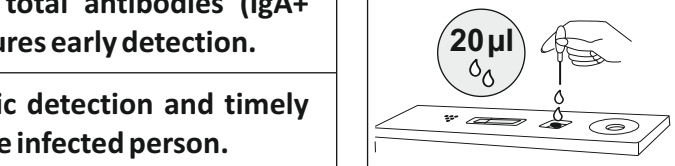


Coviscreen™ is rapid double antigen screening test for detection of Total antibodies (IgA+IgM+IgG) to COVID-19 in human serum/ plasma and whole blood.

FEATURES	BENEFITS
Double Antigen Sandwich Assay.	Detection of total antibodies (IgA+ IgM+IgG) ensures early detection.
Recombinant antigen used in both capture and tracer part.	Ensure specific detection and timely isolation of the infected person.
Finger-prick whole blood and/or serum/plasma or venous whole blood can be used.	Facilitates mass testing at the patient site, and also in laboratory setup.
Well optimized assay.	Standardised test, suitable for all types of demography.
Sensitivity : 100% Specificity: 99.07%	Reliable performance.

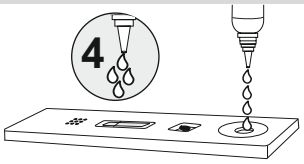
TEST PROCEDURE

STEP 1



Dispense two drops or 20 µl sample into specimen port (A).

STEP 2



Dispense four drops of Buffer into buffer port (B).

STEP 3

20 Minutes

Read the results at the end of 20 Minutes.
Do not read the results beyond 30 Minutes.

INTERPRETATION OF RESULT

Negative for specific antibodies to SARS-CoV-2 virus

Positive for specific antibodies to SARS-CoV-2 virus

Invalid Result Repeat the test

*** Source References:**

[1] N. M. OKBA, M. A. Muller, W. Li, C. Wang, C. H. GeurtsvanKessel, V. M. Corman, M. M. Lamers, R. S. Sikkema, E. d. Bruin, F. D. Chandler, Y. Yazdanpanah, Q. L. Hingrat, D. Descamps, N. H. Fidouh, C. B. Reusken, B. J. Bosch, C. Drosten, M. P. Koopmans and B. L. Haagmans, "SARS-CoV-2 specific antibody responses in COVID-19 patients," medRxiv, 20 March 2020.

[2] K. K.-W. To, O. T.-Y. Tsang, W. S. Leung, A. R. Tam, T. C. Wu, D. C. Lung, C. C.-Y. Yip, J.-P. Cai, J. M.-C. Chan, T. S.-H. Chik, D. P.-L. Lau, C. Y.-C. Choi, L. L. Chen, W. M. Chan, K. H. Chan, J. Daniel, A. C.-K. Ng, R. W.-S. Poon, C. T. Luo, V. C.-C. Cheng, J. F.-W. Chan, I. F.-N. Hung, Z. Chen, H. Chen and K. Y. Yuen, "Temporal profiles of viral load in posterior oropharyngeal saliva samples and serum antibody responses during infection by SARS-CoV-2: an observational cohort study," The Lancet-Infectious Diseases, 23 March 2020.

[3] L. Guo, L. Ren, S. Yang, M. Xiao, D. Chang, F. Yang, C. S. Dela Cruz, Y. Wang, C. Wu, Y. Xiao, L. Zhang, L. Han, S. Dang, Y. Xu, Q. W. Yang, S. Y. Xu, H. D. Zhu, Y. C. Xu, Q. Jin, L. Sharma, L. Wang and J. Wang, "Profiling Early Humoral Response to Diagnose Novel Coronavirus Disease (COVID-19)," Clinical Infectious Diseases, 21 March 2020.

[4] J. Zhao, Q. Yuan, H. Wang, W. Liu, X. Liao, Y. Su, X. Wang, J. Yuan, T. Li, J. Li, S. Qian, C. Hong, F. Wang, Y. Liu, Z. Wang, Q. He, Z. Li, B. He, T. Zhang, Y. Fu, S. Ge, L. Liu, J. Zhang, N. Xia and Z. Zhang, "Antibody responses to SARS-CoV-2 in patients of novel coronavirus disease 2019.," Clinical Infectious Diseases, 28 March 2020.

[5] Huan Ma, Weihong Zeng, Hongliang He,Dan Zhao, Yunru Yang, Dehua Jiang, Peigen Zhou ,Yingjie Qi, Weihuang He, Changcheng Zhao, Ruting Yi, Xiaofang Wang, Bo Wang, Yuanhong Xu,Yun Yang, Arnaud John Kombe Kombe, Chengchao Ding, Jiajia Xie, Yong Gao, Linzhao Cheng,Yajuan Li, Xiaoling Ma, Tengchuan Jin, "COVID-19 diagnosis and study of serum SARS-CoV-2 specific IgA, IgM and IgG by a quantitative and sensitive immunoassay", medRxiv, https://doi.org/10.1101/2020.04.17.20064907, April 22, 2020.

REF Cat. No.	Σ Pack size
502080001	1 Test
502080010	10 Tests
502080025	25 Tests
502080100	100 Tests

ISO 13485 Certified Company

For further information contact :

TULIP DIAGNOSTICS (P) LTD.

Gitanjali, Tulip Block, Dr. Antonio do Rego Bagh, Alto Santacruz, Bambolim Complex Post Office, Goa - 403 202, INDIA.
Tel.: +91 832 2458546-50 **Fax :** +91 832 2458544 **E-mail :** sales@tulipgroup.com **Website :** www.tulipgroup.com

06-20/VER-02