

PRODUCT INFORMATION

SARS-CoV-2 Neutralizing Antibody-Negative Human Serum

Item No. 31567

Overview

Contents: This vial contains 50 µl human serum.
Stability: ≥2 years at -80°C

Serum samples have been tested for ability to interfere with the ACE2/Spike RBD interaction using the Genscript cPass™ Surogate Virus Neutralization Test. Using a performance cutoff, the samples are deemed Neutralizing Antibody-Negative or Neutralizing Antibody-Positive.

Description

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is an enveloped positive-stranded RNA virus and the causative agent of COVID-19, a primarily respiratory illness characterized by fever, cough, and shortness of breath that can lead to life-threatening complications.¹⁻⁵ The SARS-CoV-2 genome encodes four structural proteins: surface glycoprotein, envelope, membrane, and nucleocapsid.^{1,2} The surface glycoprotein, also known as the spike glycoprotein, is located on the outer envelope of the virion and binds to the carboxypeptidase angiotensin-converting enzyme 2 (ACE2), which acts as the functional receptor for SARS-CoV-2 and facilitates virus cell entry.¹ SARS-CoV-2 infection can result in the production of SARS-CoV-2 neutralizing antibodies, which can prevent further viral entry and infection.^{6,7} Plasma levels of SARS-CoV-2 spike glycoprotein-specific IgG antibodies have been reported to increase for at least four weeks after symptom onset followed by a decline in antibody levels over several months post-infection in both symptomatic and asymptomatic individuals.⁶⁻⁹ This product contains human serum negative for SARS-CoV-2 neutralizing antibodies.

Human blood products should always be properly handled in accordance with safe handling procedures. Disposal should follow state and federal regulations and is the responsibility of the customer.

References

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3. Meo, S.A., Alhowikan, A.M., Al-Khlaiwi, T., et al. Novel coronavirus 2019-nCoV: Prevalence, biological and clinical characteristics comparison with SARS-CoV and MERS-CoV. *Eur. Rev. Med. Pharmacol. Sci.* **24**(4), 2012-2019 (2020).
4. Klok, F.A., Kruip, M.J.H.A., van der Meer, N.J.M., et al. Incidence of thrombotic complications in critically ill ICU patients with COVID-19. *Thromb. Res.* **191**, 145-147 (2020).
5. Yang, F., Shi, S., Zhu, J., et al. Analysis of 92 deceased patients with COVID-19. *J. Med. Virol.* (2020).
6. Wang, A., Zhang, L., Sang, L., et al. Kinetics of viral load and antibody response in relation to COVID-19 severity. *J. Clin. Invest.* (2020).
7. Xiang, F., Wang, X., He, X., et al. Antibody detection and dynamic characteristics in patients with coronavirus disease 2019. *Clin. Infect. Dis.* (2020).
8. Li, L., Tong, X., Chen, H., et al. Characteristics and serological patterns of COVID-19 convalescent plasma donors: Optimal donors and timing of donation. *Transfusion* (2020).
9. Long, Q.-X., Tang, X.-J., Shi, Q.-L., et al. Clinical and immunological assessment of asymptomatic SARS-CoV-2 infections. *Nat. Med.* (2020).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM