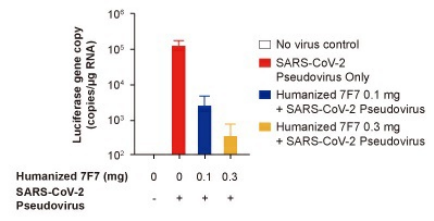
SARS-CoV-2

COVID-19 Pseudovirus Neutralizing Antibody Assay (Luciferase)

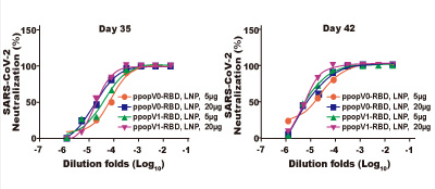
Catalog # KA6152 Size 1 Kit

Applications



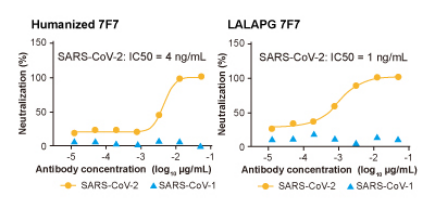
In vivo Neutralization

Hamsters received 2 doses of humanized monoclonal antibody 7F7 and then were infected with SARS-CoV-2 Pseudovirus Expressing Luciferase (Cat # U0401).



Neutralization

RBD-binding IgG responses in mouse sera collected 35 days and 42 days after immunization with 5 ug or 20 ug COVID-19 RBD SAM LNP no adjuvant (ppopV0) and 5 ug or 20 ug COVID-19 RBD SAM plus adjuvant (ppopV1).



Neutralization

SARS-CoV-2 spike pseudovirus expressing luciferase is treated with humanized monoclonal antibody 7F7 and LALAPG 7F7, and then added into 293T-ACE cells.

Specification

Product Description	COVID-19 Pseudovirus Neutralizing Antibody Assay (Luciferase) provides a highly sensitive and quantitative measurement of neutralizing antibodies.

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Supplied Product	Kit content: 1 kit is sufficient for 100 assays in 24 well plates 1. 293T-hACE2 cell, 2x10^6cells/vial, FBS with 10% DMSO 2. SARS-CoV-2 Pseudovirus Expressing Luciferase
Materials Required But NOT Supplied	1. SARS-CoV-2 Monoclonal Antibody, Cat# MAB22854-M07, Abnova 2. ZymeFree™ Enzyme Free Cell Dissociation Reagent, Cat# TCL028-100ML, HIMEDIA 3. DMEM culture medium containing 10% FBS (complete medium) 4. Luciferase Assay System, Cat# E1500, Promega a. Luciferase Assay Substrate (lyophilized) b. Luciferase Assay Buffer c. Luciferase Cell Culture Lysis Reagent, 5X 5. TC-Treated 24 Well Plates, Cat# 3524, Corning 6. OptiPlate™-96, Cat# 6005290, PerkinElmer
Suitable Sample	1. Immunized Serum 2. Infected Serum 3. Neutralizing Antibodies 4. Peptide Inhibitors or Proteins 5. Compounds Targeting Spike Induced Cell Fusion
Sample Volume	10-50 uL (please check sample source)
Assay Type	Quantitative
Detection Method	Luciferase Activity
Technology	Pseudovirus
Regulatory Status	For research use only (RUO)
Storage Instruction	293T-hACE2 cell Store at liquid nitrogen. Pseudovirus Store at -80°C. Aliquot to avoid repeated freezing and thawing.

Applications

- *In vivo* Neutralization

  Hamsters received 2 doses of humanized monoclonal antibody 7F7 and then were infected with SARS-CoV-2 Pseudovirus Expressing Luciferase (Cat # U0401).

- Neutralization

  RBD-binding IgG responses in mouse sera collected 35 days and 42 days after immunization with 5 ug or 20 ug COVID-19 RBD SAM LNP no adjuvant (ppopV0) and 5 ug or 20 ug COVID-19 RBD SAM plus adjuvant (ppopV1).

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- Neutralization

  SARS-CoV-2 spike pseudovirus expressing luciferase is treated with humanized monoclonal antibody 7F7 and LALAPG 7F7, and then added into 293T-ACE cells.

Publication Reference

- Development of bispecific antibodies with enhanced neutralization activity against tested SARS-CoV-2 Omicron subvariants.

  Ching-Hsuan Hsu, Ting-Yi Chang, Ya-Min Chang, Shin-Han Lin, Tzu-Ning Chen, Keng-Hao Hsu, Jhong-Jhe You

  Front Immunol 2026 7; 170:1793368.

- Protocol to express anti-viral nanobodies and antigenic proteins anchored on the bacterial cell surface through the engineering of probiotic Escherichia coli Nissle 1917.

  Nitin S Kamble, Abram Canowitz, Nathan Muck, Komalpreet Kaur, Nalinikanth Kotagiri.

  STAR protocols 2026 Jan; 7(1):104341.

  Application: Quant, N/A, Blood, Feces, Intestines, Bronchoalveolar lavage fluid

- Engineered bacteria as an orally administered anti-viral treatment and immunization system.

  Nitin S. Kamble, Shindu Thomas, Tushar Madaan, Nadia Ehsani, Saqib Sange, Kiersten Tucker, Alexis Muhumure, Sarah Kunkler & Nalinikanth Kotagiri.

  Gut Microbes 2025 May; 17(1).

  Application: Cell Culture, Virus, SARS-CoV-2 pseudovirus

- Immunogenicity and safety of a live-attenuated SARS-CoV-2 vaccine candidate based on multiple attenuation mechanisms.

  Mie Suzuki Okutani, Shinya Okamura, Tang Gis, Hitomi Sasaki, Suni Lee, Akiho Kashiwabara, Simon Goto, Mai Matsumoto, Mayuko Yamawaki, Toshiaki Miyazaki, Tatsuya Nakagawa, Masahito Ikawa, Wataru Kamitani, Shiro Takekawa, Koichi Yamanishi, Hirotaka Ebina

  Elife 2025 Feb; 13.

- Development of a Candidate TMV Epitope Display Vaccine against SARS-CoV-2.

  Kelvin Phiri, Larry Grill

  Vaccines (Basel) 2024 Apr; 12(5).

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