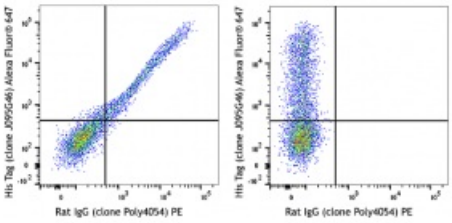
SONY

Product Data Sheet

Purified anti-SARS-CoV-2 S Protein S1

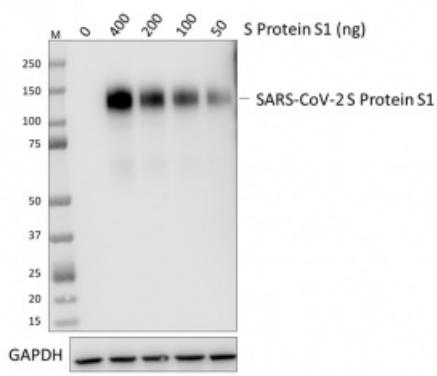
Catalog # / Size:	5325505 / 25 µg 5325510 / 100 µg
Clone:	A20103O
Isotype:	Rat IgG2a, κ
Immunogen:	Partial recombinant SARS-CoV-2 S protein corresponding to S1 subunit
Reactivity:	SARS-CoV-2
Preparation:	The antibody was purified by affinity chromatography.
Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Concentration:	0.5 mg/mL



His-tagged SARS-CoV-2 S protein S1 transfected CHO cells were stained with anti-S1 (clone A20103O) purified (left) or rat IgG2a, κ isotype control (clone RTK2758) purified (right) followed by anti-rat IgG PE (clone Poly4054) and Alexa Fluor® 647 anti-His Tag (clone J095G46).

Applications:

Applications:	Flow Cytometry, Other
Recommended Usage:	Each lot of this antibody is quality control tested by western blotting. For western blotting, the suggested use of this reagent is 1.0 µg/mL. For Direct ELISA, a concentration of 114.9 ng/mL is recommended. For flow cytometric staining, the suggested use of this reagent is ≤ 0.5 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes:	Clone A20103H displayed the strongest performance for western blot of all clones validated for the application.



Whole cell extracts (15 µg total protein) from HeLa cells mixed with the indicated amount of His-tagged recombinant SARS-CoV-2 S Protein S1 (Cat. No. 792906) were resolved by 4-12% Bis-Tris gel electrophoresis, transferred to a PVDF membrane, and probed with 1.0 µg/mL (1:500 dilution) purified anti-SARS-CoV-2 S Protein S1 antibody (clone A20103O) overnight at 4°C. Proteins were visualized by chemiluminescence detection using HRP goat anti-human IgG antibody at a 1:3000 dilution. Direct-Blot™ HRP anti-GAPDH antibody (Cat. No. 607904) was used as a loading control at a

1:25000 dilution (lower). Lane M: Molecular weight marker.

Description: SARS-CoV-2 is a respiratory virus which causes coronavirus disease 2019 (COVID-19). The coronavirus spike (S) glycoprotein is a class I viral fusion protein on the outer envelope of the virion that plays a critical role in viral infection by recognizing host cell receptors and mediating fusion of the viral and cellular membranes. The S glycoprotein is synthesized as a precursor protein consisting of about 1,300 amino acids that is then cleaved into an amino (N)-terminal S1 subunit (about 700 amino acids) and a carboxyl (C)-terminal S2 subunit (about 600 amino acids). Three S1/S2 heterodimers assemble to form a trimer spike protruding from the viral envelope. The S1 subunit contains a receptor-binding domain (RBD) that can specifically bind to angiotensin-converting enzyme 2 (ACE2), the receptor on target cells. Triggered by receptor binding, proteolytic processing and/or acidic pH in the cellular compartments, the class I viral fusion protein undergoes a transition from a metastable pre-fusion state to a stable post-fusion state during infection, in which the receptor-binding subunit is cleaved, and the fusion subunit undergoes large-scale conformational rearrangements to expose the hydrophobic fusion peptide, induce the formation of a six-helix bundle, and bring the viral and cellular membranes close for fusion. The trimeric SARS coronavirus (SARS-CoV-2) S glycoprotein consisting of three S1-S2 heterodimers binds the cellular receptor angiotensin-converting enzyme 2 (ACE2) and mediates fusion of the viral and cellular membranes through a pre- to post-fusion conformation transition.

Antigen References:

1. Walls AC, *et al.* 2020. *Cell.* 181(2):281-292.
2. Yan R, *et al.* 2020. *Science.* 367 (6485):1444-1448.
3. Wrapp D, *et al.* 2020. *Science.* 367 (6483):1260-1263.
4. Shang J, *et al.* 2020. *PNAS.* 117(21):11727-11734