

## SARS-CoV-2 Spike Antibody (AM002414)

### Catalog No: 91349

**RRID:** AB\_3216339

**Clone:** AM002414 (414-2)

**Application(s):** ELISA, NEU

**Reactivity:** Virus

**Quantity:** 100 µg

**Purification:** Protein A Chromatography

**Host:** Human

**Isotype:** IgG1, k

**Molecular Weight:** 141 kDa (full length S1 protein)

**Background:** COVID-19, which is short for coronavirus disease 2019, is the official name of the respiratory disease caused by infection with the novel coronavirus SARS-CoV-2. The virus that causes COVID-19 was named SARS-CoV-2 because it is a coronavirus genetically similar to, yet distinct from, the virus that caused the severe acute respiratory syndrome (SARS) outbreak in 2003. Studying the details of how this virus replicates and causes the disease will allow scientists and physicians to more rapidly develop fast and accurate methods of detection as well as to deploy therapeutic and vaccine strategies.

This antibody was derived from COVID-19 patients who have cleared the virus. Patient serum IgG was sequenced and expressed as full-length IgG1 with human immunoglobulin heavy and light chains in mammalian 293 cells.

**Immunogen:** N/A

**Buffer:** 140 mM Hepes, pH 7.5, 70 mM NaCl, 32 mM NaOAc, 0.035% sodium azide, and 30% glycerol. Sodium azide is highly toxic.

### Application Notes:

Applications Validated by Active Motif:

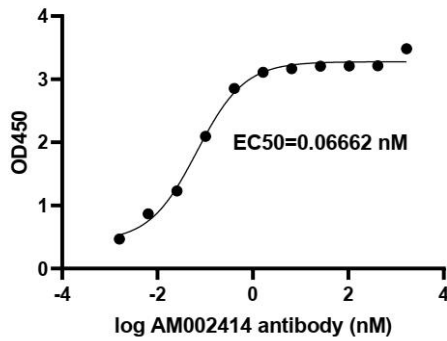
ELISA

This antibody has been tested by ELISA and is specific for SARS-CoV-2 Spike protein S1 Subunit of Receptor Binding Domain (RBD).

Note: Clone AM002414, developed by Active Motif, was originally published as Clone 414-2. Details on the development and characterization of this clone are available here: Wan J., et. al. Human IgG neutralizing monoclonal antibodies block SARS-CoV-2 infection. Cell Reports, 32: 107918, July 21, 2020.

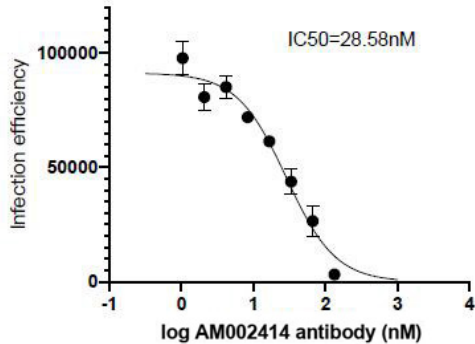
**Storage and Guarantee:** Some products may be shipped at room temperature. This will not affect their stability or performance. Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage. This product is guaranteed for 12 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.



**SARS-CoV-2 Spike Antibody (clone AM002414) tested by ELISA.**

SARS-CoV-2 Spike RBD protein was coated onto microtiter plates at 0.5 µg/mL and then incubated with a dilution series of SARS-CoV-2 Spike Antibody (clone AM002414). Bound antibodies were detected with anti-human IgG conjugated to horseradish peroxidase (HRP) followed by incubation with HRP Substrate and then measuring the resulting absorbance at 450 nm.



**SARS-CoV-2 Spike Antibody (clone AM002414) tested by Neutralization.**

Viral neutralization assays were performed with pseudotyped virus carrying a luciferase reporter gene and bearing the SARS-CoV-2 S1 spike glycoprotein. A549 lung epithelial target cells expressing the ACE2 receptor were incubated with virus and a graded dose of SARS-CoV-2 Spike Antibody (clone AM002414). Luciferase signal, indicative of cellular infection and viral gene expression, was measured. Viral neutralization by SARS-CoV-2 antibodies inhibits viral entry and, by extension, virus associated luciferase signal in manner proportional to antibody dose.

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