

## Anti-Spike (S1) Antibody\_AK3422

### Description:

InVivo offers a series of different monoclonal antibodies for the detection of the Spike protein from SARS-CoV-2. All antibodies come from hybridoma cell lines that were generated by immunization with the recombinant full-length Spike protein (S) or the receptor-binding domain (RBD).

This antibody has been validated by ELISA and is specifically directed against an epitope that is located within the S1-subunit but outside the RBD. Additionally, ELISAs with directly coated antigens proved that this antibody also binds to Spike protein B.1.1.7.

It is also recommended and independently tested for use in sandwich ELISA assays.

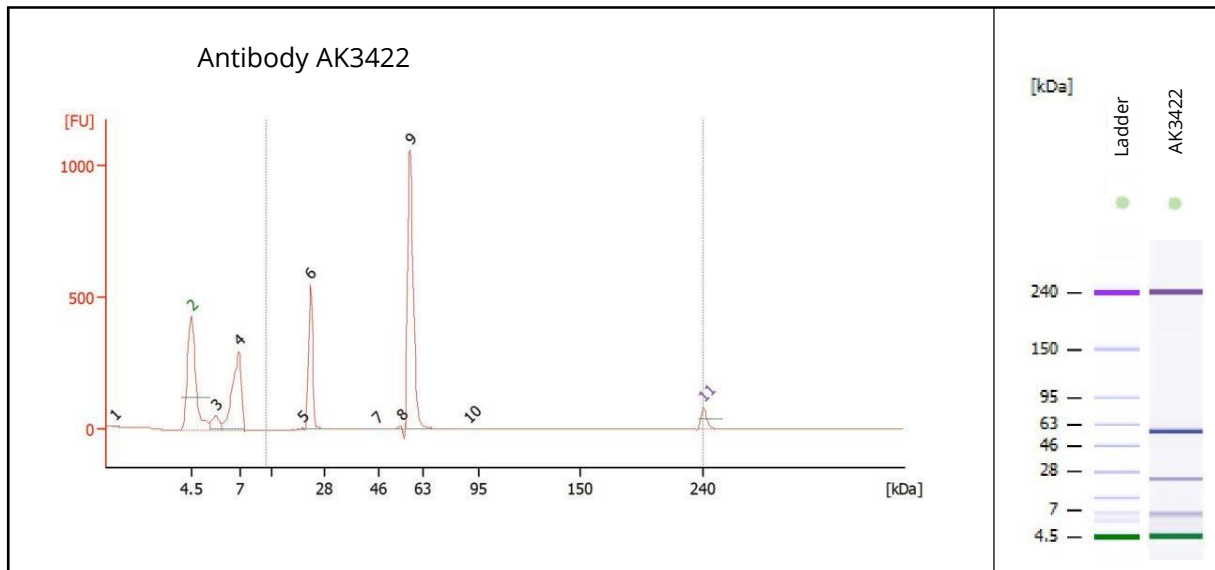
All antibodies are produced exclusively under serum-free conditions from hybridoma and purified through one-step purification with Protein-A affinity chromatography.

<b>Product-ID:</b>	AK3422
<b>Host:</b>	Mouse
<b>Clonality:</b>	Monoclonal
<b>Isotype:</b>	IgG
<b>Subclass:</b>	mIgG2ak
<b>Formulation:</b>	Liquid, PBS, pH 7.4, 0.2 µm sterile filtered
<b>Concentration:</b>	≥ 0.5 mg/ mL
<b>Purity:</b>	≥ 90% (via analytical CGE under reducing conditions)
<b>Conjugate:</b>	Unconjugated
<b>EC<sub>50</sub> S1*:</b>	0.579 nM
<b>EC<sub>50</sub> S*:</b>	0.084 nM
<b>Specificity:</b>	S (tested for: Wuhan and B.1.1.7)

\*EC<sub>50</sub> values for 20 nM of coated antigen

**The product is for research use or for further manufacturing only.**

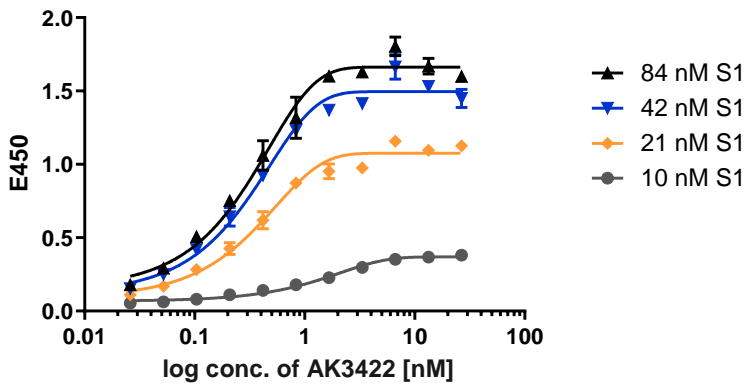
**Purity (analytical CGE, under reducing conditions):**



Peak	Size [kDa]	% of Total	Observations
1	0.5	0.0	
2	4.5	0.0	Lower Marker
3	5.8	0.0	System Peak
4	6.9	0.0	System Peak
5	22.5	0.2	
6	24.5	Peak Value 1	Light Chain
7	45.6	0.2	
8	54.6	0.6	
9	58.0	Peak Value 2	Heavy Chain
10	88.7	0.1	
11	240.0	0.0	Upper Marker

Summation of peak values 1 and 2 results in a purity of  $\geq 90\%$

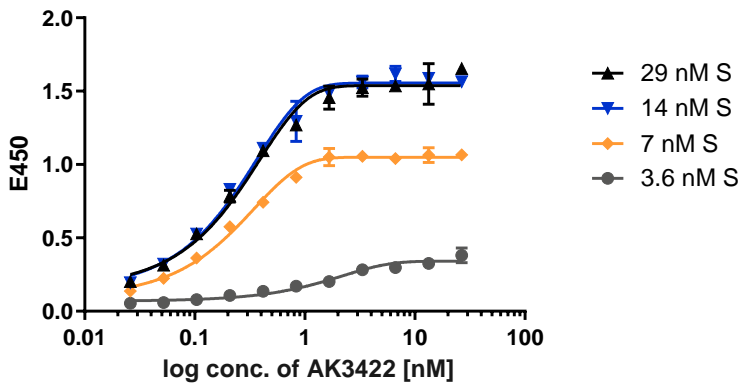
**Protein Activity (ELISA):**



For ELISA analyses immunoassay plates were coated with different concentrations of SARS-CoV-2 S1 (10, 21, 42 and 84 nM). Antibody AK3422 was applied at concentrations ranging from 26.67 nM to 0.026 nM.

Bound antibody AK3422 was detected using Goat Anti-Mouse-IgG-HRP (10 ng/mL) and TMB. Determined EC<sub>50</sub> of antibody AK3422 for 20 nM S1 is 0.579 nM.

	84 nM S1	42 nM S1	21 nM S1	10 nM S1
EC <sub>50</sub> [nM]	0.2949	0.3139	0.3587	1.481



For ELISA analyses immunoassay plates were coated with different concentrations of SARS-CoV-2 spike protein (3.6, 7, 14 and 29 nM). Antibody AK3422 was applied at concentrations ranging from 26.67 nM to 0.026 nM.

Bound antibody AK3422 was detected using Goat Anti-Mouse-IgG-HRP (10 ng/mL) and TMB. Determined EC<sub>50</sub> of antibody AK3422 for 20 nM Spike protein is 0.084 nM.

	29 nM S	14 nM S	7 nM S	3.6 nM S
EC <sub>50</sub> [nM]	0.2273	0.2196	0.2181	2.482

**Binding activity to SARS-CoV-2 Spike protein variant B.1.1.7 (ELISA):**

