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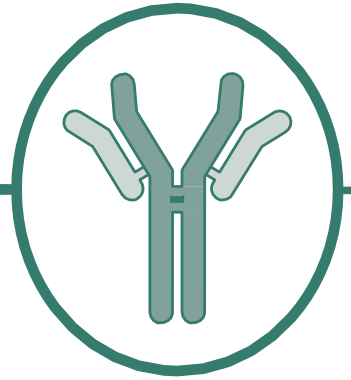

Sorrento Potent Omicron Neutralizing Antibody (nAb)

STI-9167 IV

STI-9199 IN

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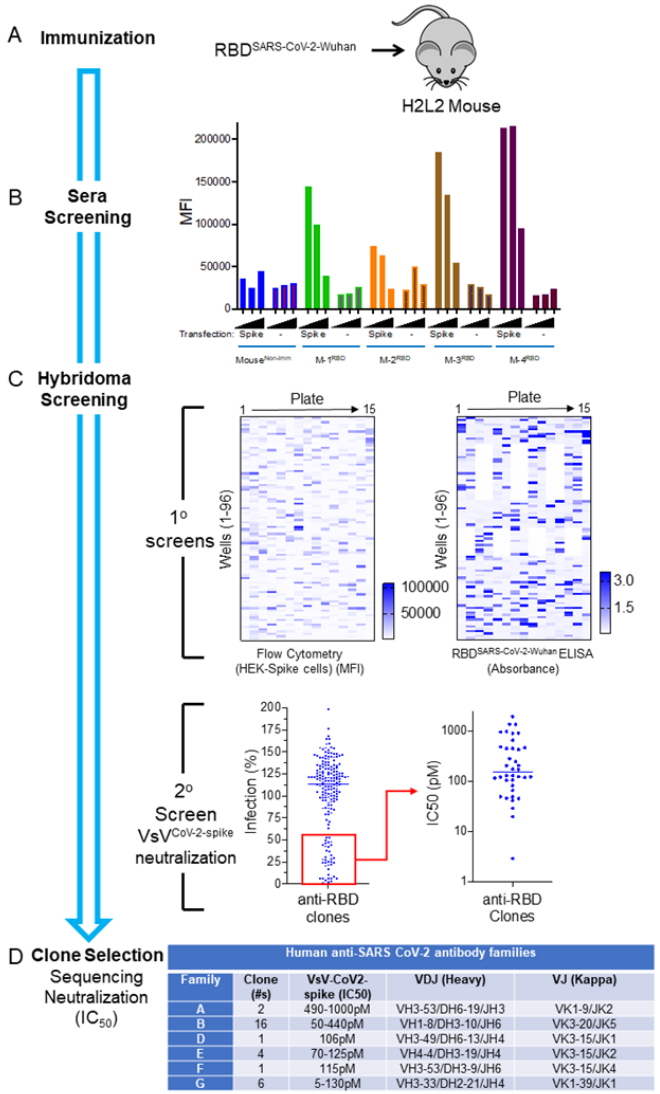
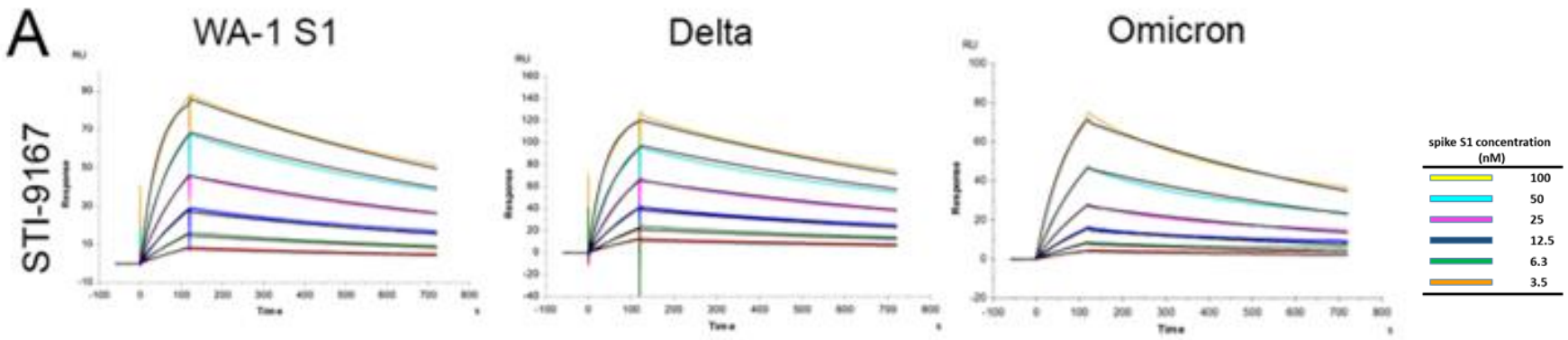
Discovery of STI-9167



Human anti-SARS CoV-2 antibody families				
Family	Clone (#s)	VsV-CoV2-spike (IC50)	VDJ (Heavy)	VJ (Kappa)
A	2	490-1000pM	VH3-53/DH6-19/JH3	VK1-9/JK2
B	16	50-440pM	VH1-8/DH3-10/JH6	VK3-20/JK5
D	1	106pM	VH3-49/DH6-13/JH4	VK3-15/JK1
E	4	70-125pM	VH4-4/DH3-19/JH4	VK3-15/JK2
F	1	115pM	VH3-53/DH3-9/JH6	VK3-15/JK4
G	6	5-130pM	VH3-33/DH2-21/JH4	VK1-39/JK1

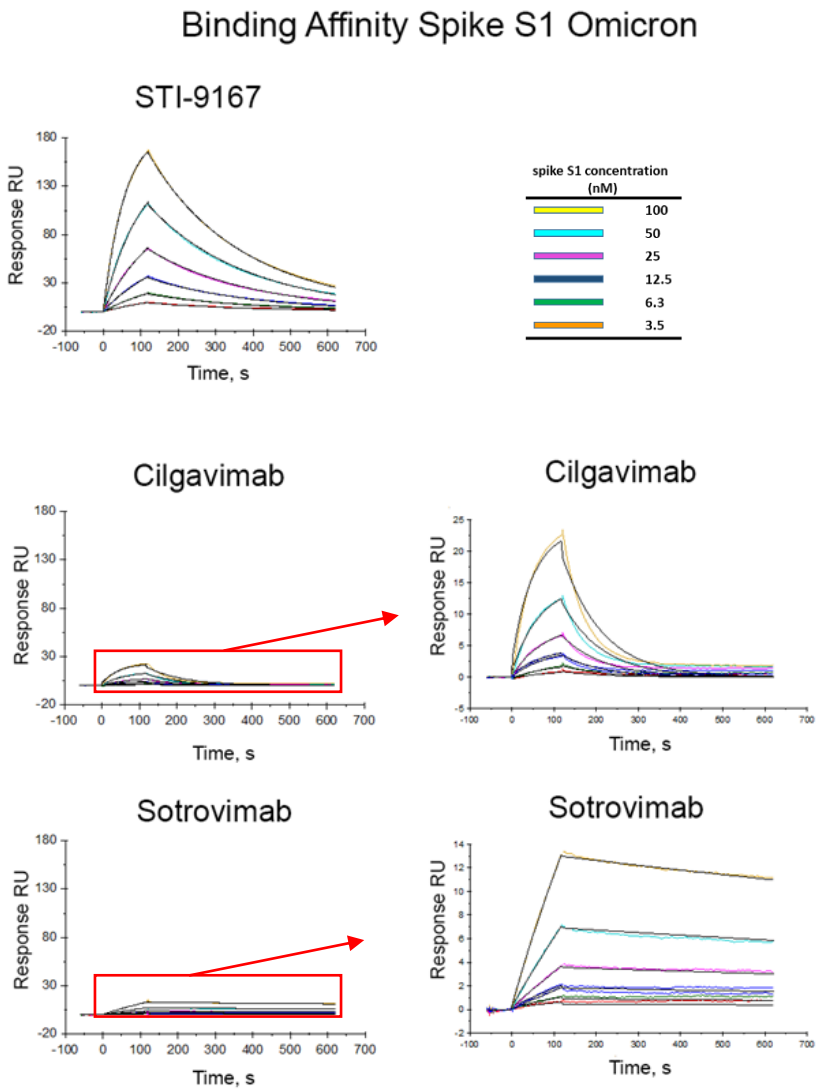
STI-9167 Binding to S1 Domain of SARS-CoV-2 Variants of Concern (VOCs)



Variant RBD	ka (1/Ms) Ab STI-9167	kd (1/s) Ab STI-9167	KD (M) Ab STI-9167	Rmax (RU) Ab STI-9167	Chi² (RU²) Ab STI-9167
WA-1	2.27 ± 0.2 E+05	1.40 ± 0.03 E-03	6.20 ± 0.44 E-09	97.2 ± 4.3	1.19 ± 0.30
Delta	3.02 ± 0.2 E+05	1.34 ± 0.04 E-03	4.45 ± 0.22 E-09	124.3 ± 7.6	2.17 ± 0.33
Omicron	1.99 ± 0.1 E+05	4.50 ± 0.10 E-03	2.26 ± 0.08 E-08	104.6 ± 5.0	0.22 ± 0.02

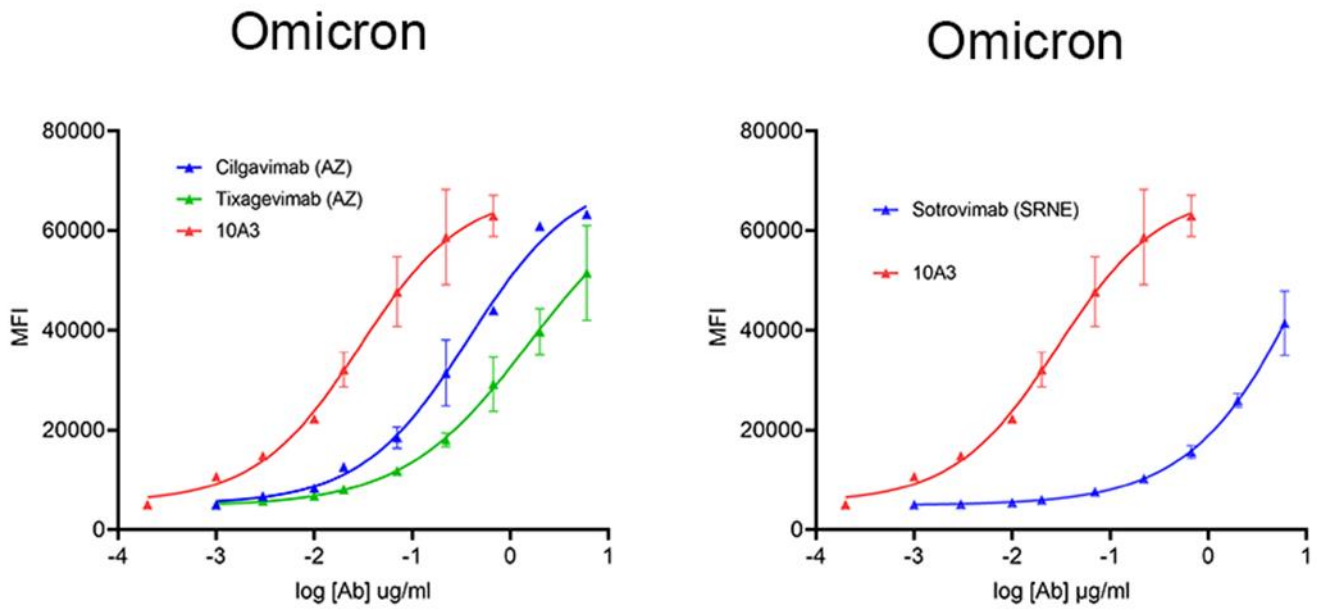
Analyte: WA-1, Delta, or Omicron spike S1 domain
Instrument: Biacore T200

STI-9167 Binding Kinetics to Spike S1 Domain Compared to Those of EUA-approved nAbs



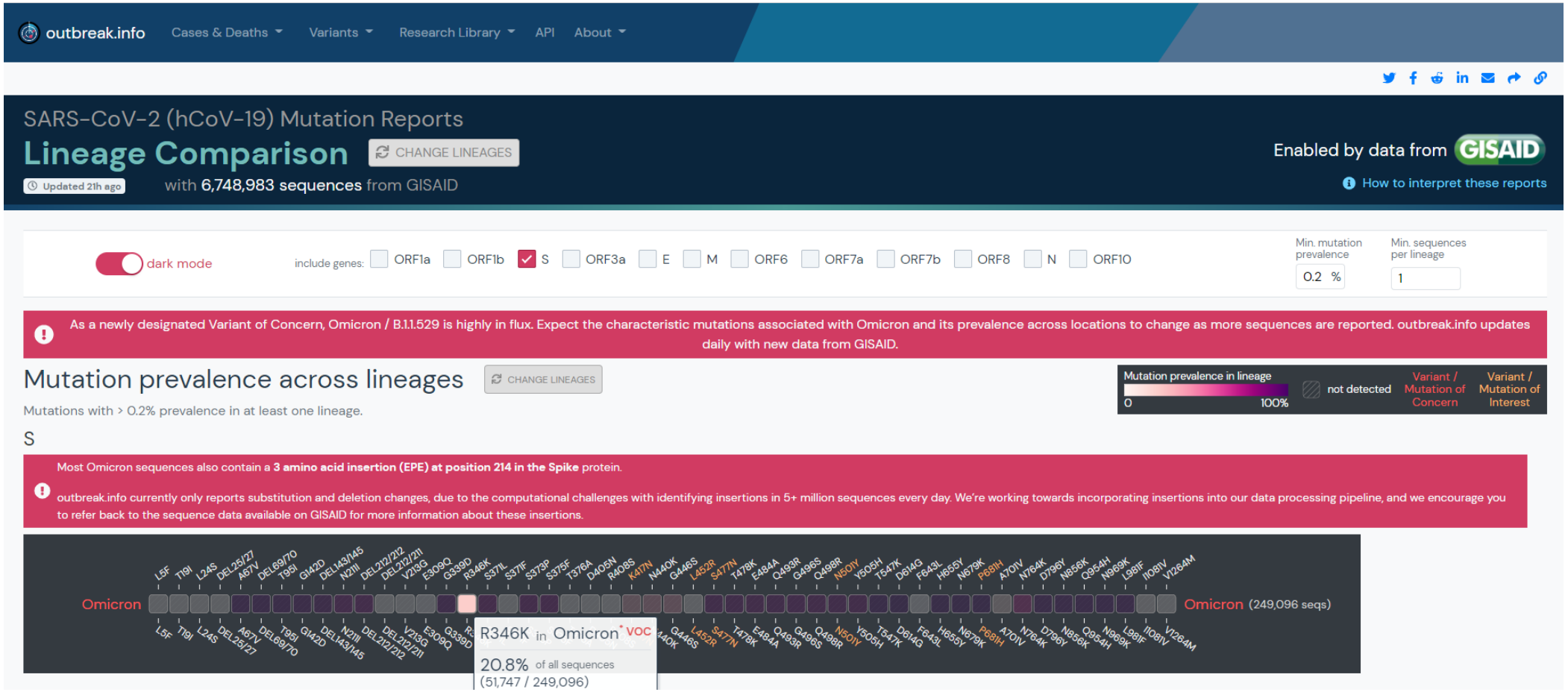
Analyte: Omicron spike S1 domain
Instrument: Biacore T200

STI-9167 Binding to SARS-CoV-2 VOC Spike Proteins Expressed on HEK293 Cells



cell-expressed spike binding EC50 (µg/mL)	
Variant spike	**Ab STI-9167**
WA-1	0.025
Delta	0.011
Omicron	0.025
Omicron + R346K	0.023

Omicron Variant and Omicron + R346K Mutation Infection Statistics

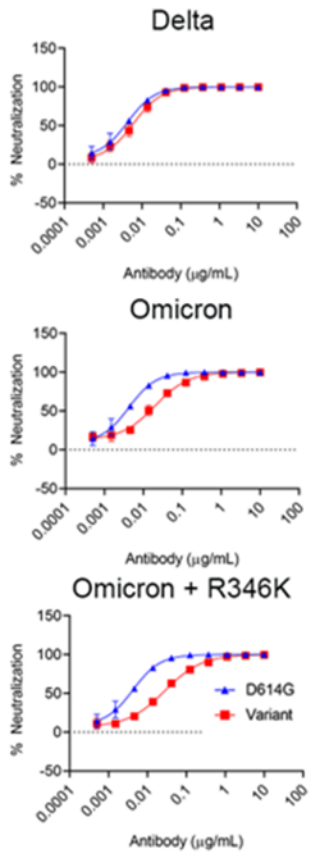


To date: No SARS-CoV-2 nAb approved or in development has been shown to have potent neutralization activity (≤ 100 ng/ml) against the Omicron + R346K variant

SARS-CoV-2 Spike-Pseudotyped VSV Neutralization Assay

Variant lineage	nAb IC_{50} (µg/ml)
	STI-9167
D614G	0.0036
Alpha (B.1.1.7)	0.0029
Beta (B.1.351)	0.0195
Gamma (P.1)	0.0063
Delta (B.1.617.2)	0.0054
Delta Plus (B.1.617.2.1)	0.0033
Epsilon (B.1.429)	0.0040
Zeta (P.2)	0.0034
Iota (B.1.526)	0.0194
Iota (B.1.526.2)	0.0024
Kappa (B.1.617.1)	0.0090
Lambda (C.37)	0.0027
Mu (B.1.621)	0.0186
Omicron (B.1.1.529)	0.0148
Omicron+R346K (B.1.1.529)	0.0239

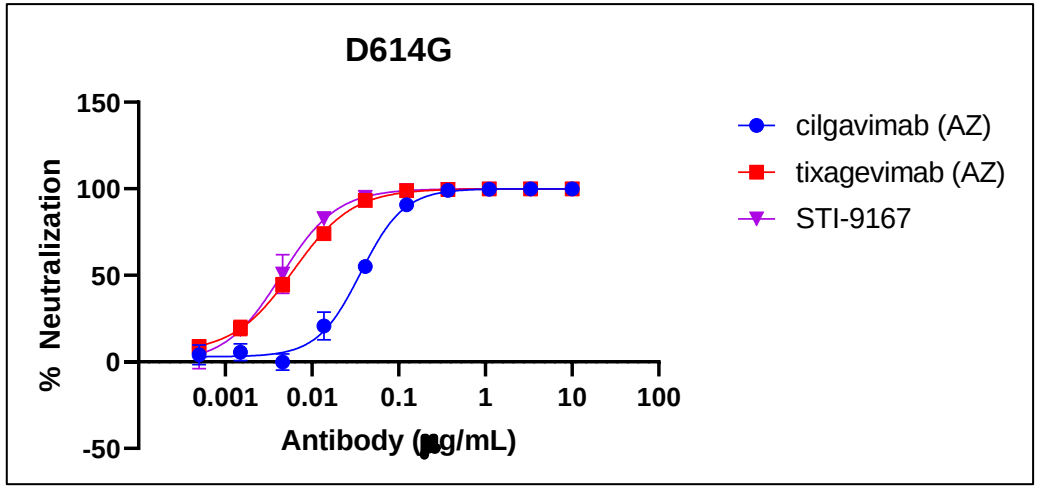
IC50 vs D614G only			
<10x	>10x	>100x	>10 ug/mL

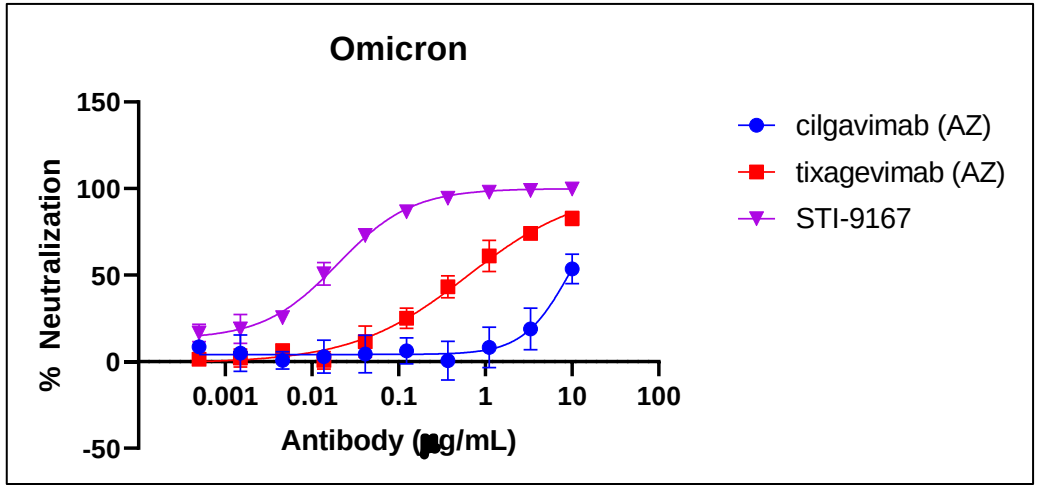


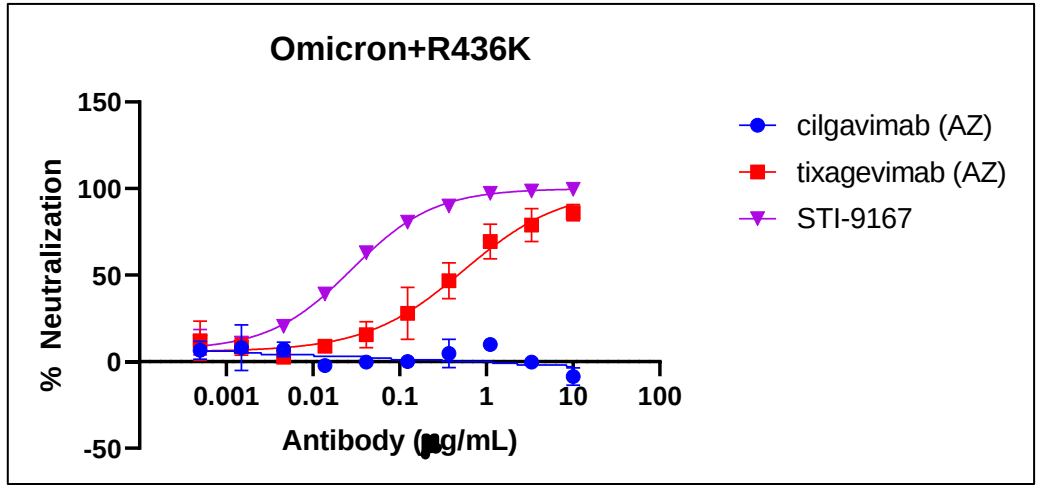
STI-9167 Superior Neutralization Activities Against Omicron and Omicron+R346K Variants in SARS-CoV-2 Spike-Pseudotyped VSV Neutralization Assays

IC50 (ug/mL)

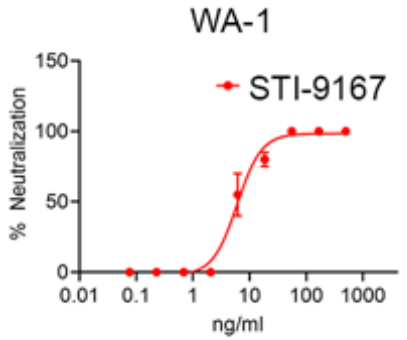
Variant Lineage	STI-9167	Cilgavimab (AZ)	Tixagevimab (AZ)
D614G	0.0036	0.0353	0.0056
Omicron (B.1.1.529)	0.0148	9.105	0.6386
Omicron+R346K (B.1.1.529)	0.0239	>10	0.4696

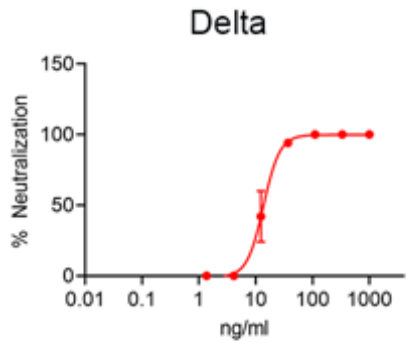


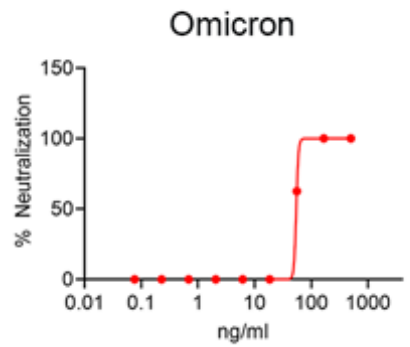




Neutralization Activity of STI-9167 in the SARS-CoV-2 Live Virus Neutralization Assays



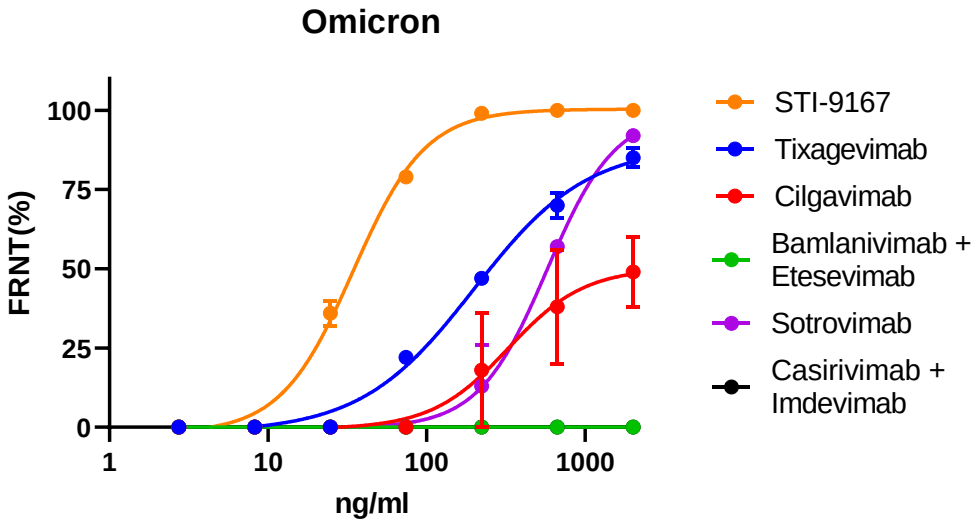




Virus neutralization IC50 (ng/mL)

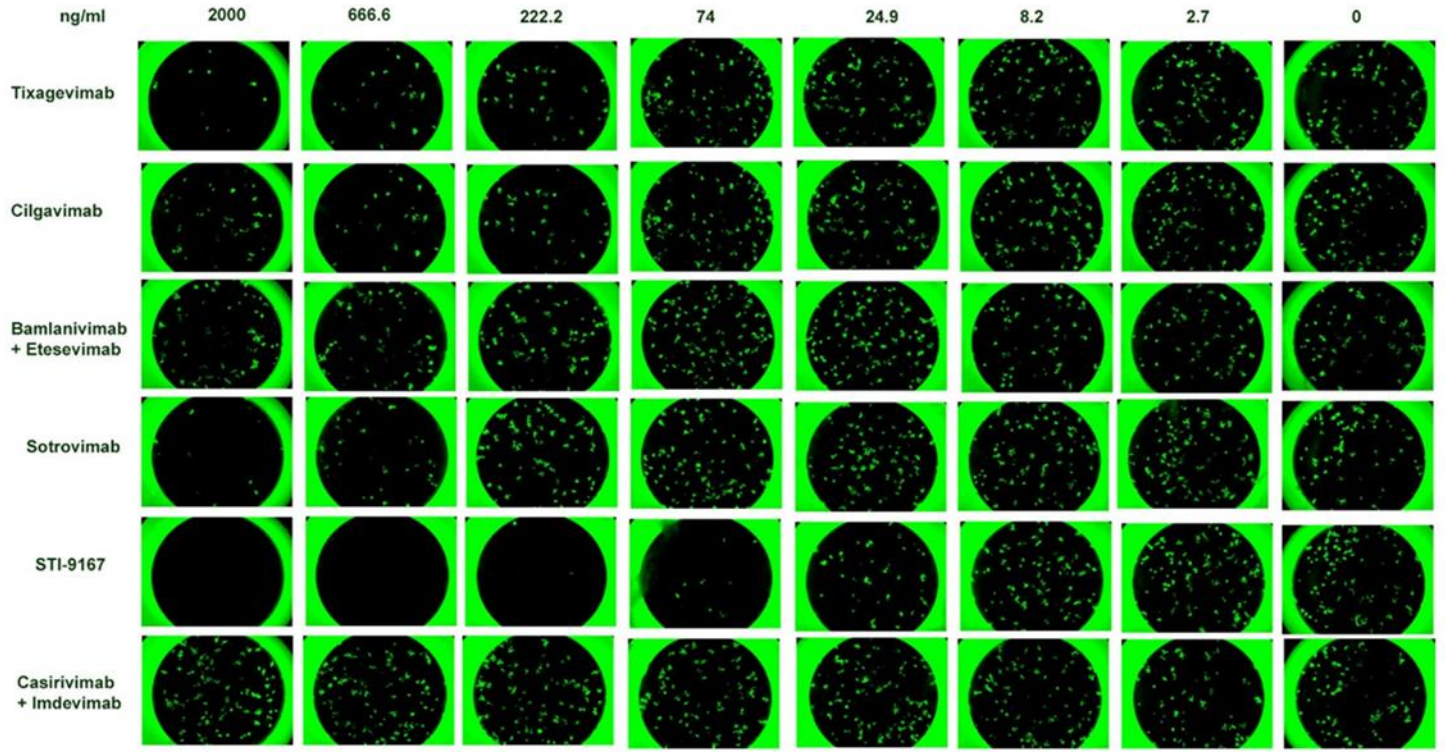
Virus	Ab STI-9167
WA-1	6.041
Delta	13.7
Omicron	54.29

Superior Neutralization Activity of STI-9167 as Compared to EUA-approved Neutralization Antibodies (nAbs) in the SARS-CoV-2 Live Omicron Virus Neutralization Assays



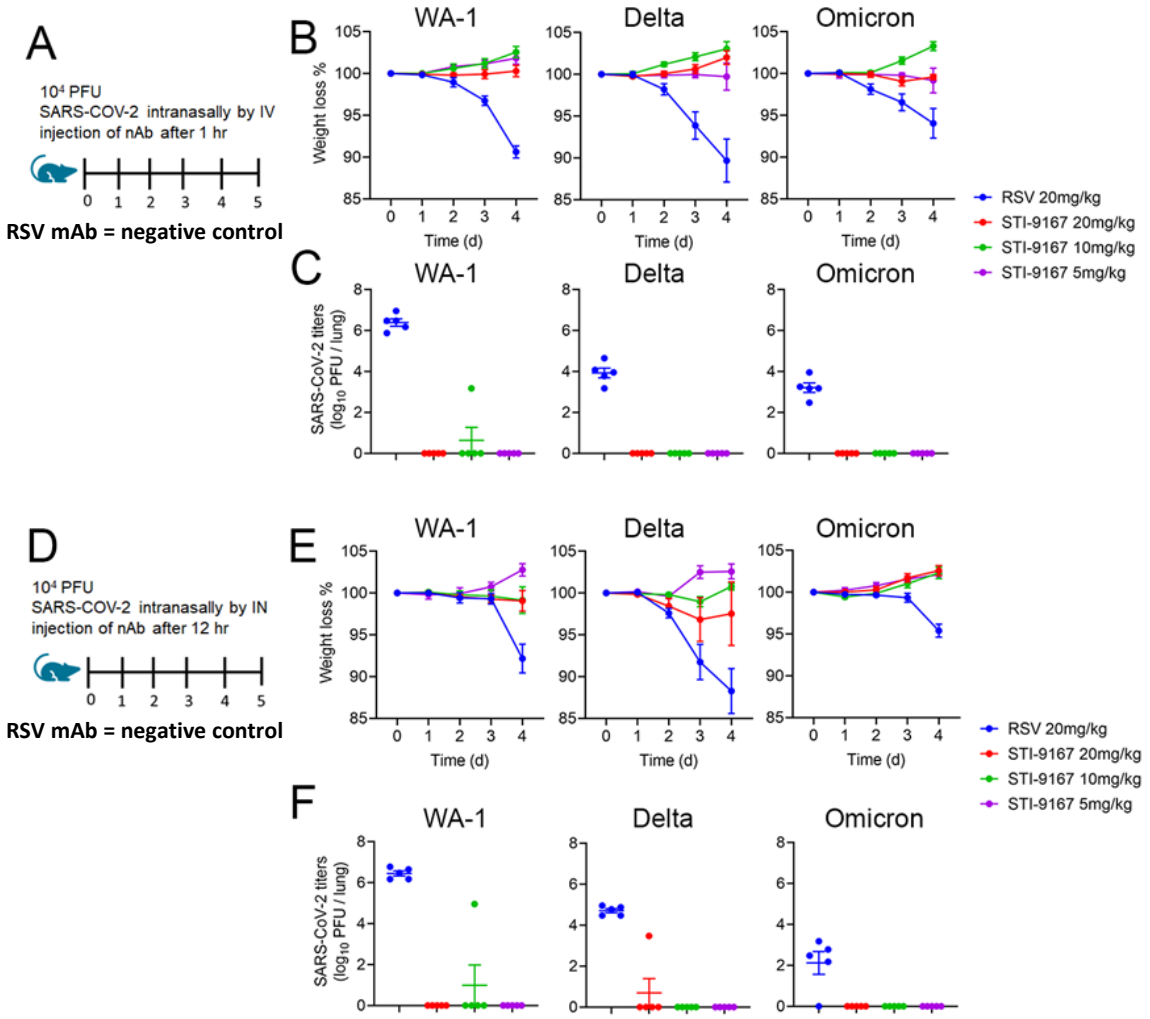
Omicron virus neutralization IC_{50} ng/ml

STI-9167	**34.4**
Tixagevimab	**198.9**
Cilgavimab	**326**
Sotrovimab	**573.1**
Bamlanivimab + Etesevimab	**> 2000**
Casirivimab + Imdevimab	**> 2000**



- Vero cells infected with 500 pfu Omicron variant virus
- Infection visualized with anti-SARS-CoV-2 nucleoprotein antibody

STI-9167 Neutralizing Activity Following IN or IV Administration in the K18-hACE2 Transgenic Mouse Model of COVID-19



STI-9167 GMP Manufacturing and Clinical Developmental Status

- ✓ **STI-9167 GMP Master Cell Bank generation completed**
- ✓ **STI-9167 GMP Drug Product to supply Phase 1/2 studies formulated for intranasal and intravenous dosing has been F/F**
  - ✓ **Already manufactured enough drug substance for 100,000's of intranasal doses**
- ✓ **IND-enabling preclinical safety and toxicology studies completed**
- **IND submission in early February**
- **Phase 1 clinical trials planned in healthy individuals and infected patients for both intranasal formulation (COVIDROPS) and intravenous formulation (COVISHIELD)**