

TECHNICAL DOCUMENT

Affinity's high-affinity neutralising antibodies

2 July 2020, Melbourne, Australia

Affinity generated human single-chain antibodies against the SARS-CoV-2 S1 RBD domain.

Three of our lead single-chain antibodies that blocked binding of the viral S1 trimer to the human ACE2 receptor were converted to IgG1 monoclonal antibodies.

Our lead antibody demonstrated a dissociation half-life from the S1 trimer of **greater than 10 hours**, with a K_D of 20 pM. This antibody was used in a live SARS-CoV-2 virus neutralisation assay where, at <4 microgram per millilitre concentrations it provided 100% protection for the 5-day assay duration.

Key points:

- Fully-human IgG1
- Lead clone has a K_D of 20 pM to viral S1 trimer
- Demonstrated ACE2-blocking

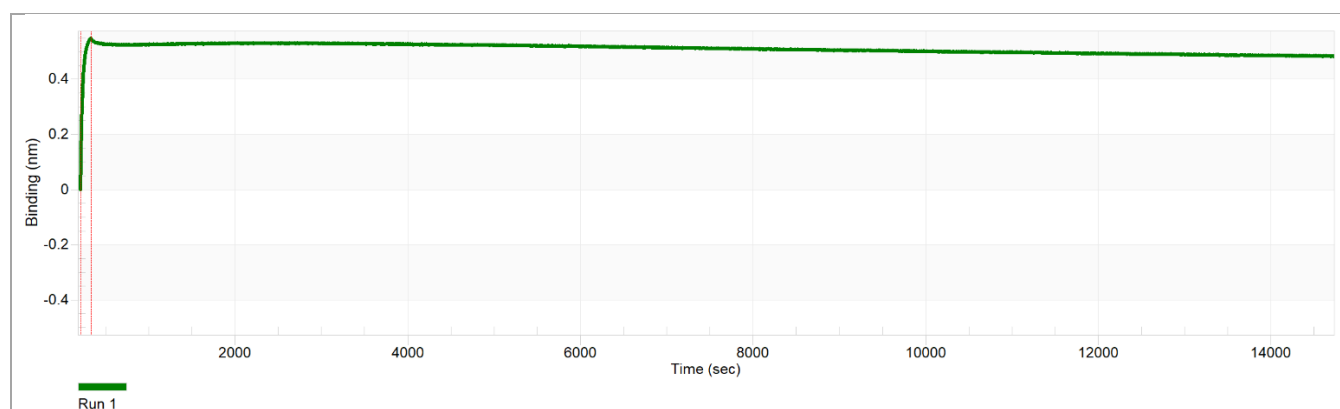


Figure 1: The kinetic binding and dissociation of our lead IgG1 for the viral S1 trimer was assessed using bio-layer interferometry (BLI). Biotinylated S1 trimer was first loaded onto the BLI biosensor and antibody bound at a concentration of 100 nM. The dissociation was performed for 4 hours at 25°C.

Further information about Affinity's antibodies can be found at affinity.bio/covid-19.

Media contact: WE-AUAffinityBio@we-worldwide.com