



Case Study:

How the Membrane Proteome Array Enabled Rapid Progression of a Neutralizing SARS-CoV-2 MAb



THE NEED

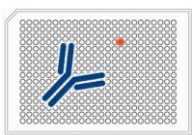
In response to the COVID-19 pandemic, AboundBio developed potent neutralizing monoclonal antibodies (MAbs) against SARS-CoV-2. To progress development of a lead MAb, the company sought reassurance that their preclinical candidate did not possess off-target reactivity to human membrane proteins that could result in toxic effects. Off-target reactivity of therapeutic MAbs has been observed with other SARS-CoV-2 MAbs, so testing across the membrane proteome helps to validate therapeutic safety.

THE SOLUTION

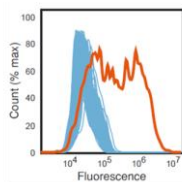
Membrane Proteome Array™

Integral Molecular's Membrane Proteome Array (MPA) was used to profile a high-affinity antibody that potentially neutralizes SARS-CoV-2 by blocking its binding to the ACE2 protein, the receptor interaction driving infection. Abound Bio is developing this antibody for the treatment of COVID-19.

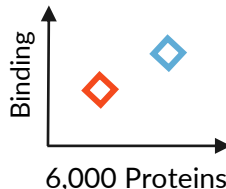
6,000 Protein Array



Measure Binding



Profile Specificity



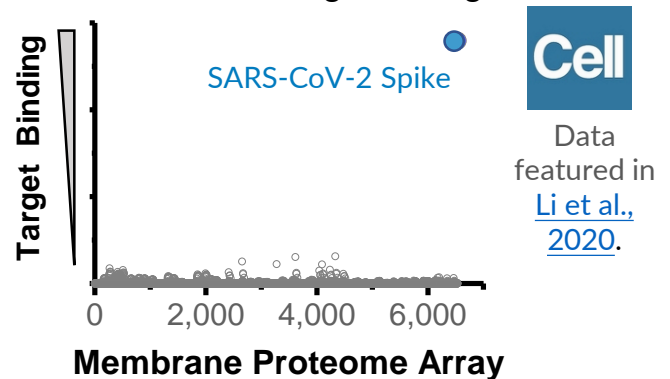
“For this high-priority project, we relied on Integral Molecular's rapid specificity profiling to rule out liabilities arising from unexpected antibody cross-reactivity in human cells.”

-Dimitar Dimitrov, PhD, ScD
CSO, Abound Bio

THE IMPACT

MAb Progression for Development

Lead SARS-CoV-2 MAb does not show off-target binding



“MPA technology quickly provided us with the reassurance that Abound Bio's potent, neutralizing antibodies to SARS-CoV-2 did not bind off-target human membrane proteins which could be associated with toxicity.”

-John W. Mellors, MD
CEO, Abound Bio

Looking for more information? Contact us:

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