















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Rapid isolation and profiling of a diverse panel of human monoclonal antibodies targeting the SARS-CoV-2 spike protein

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Supplemental Table 1. Workflows used to isolate SARS-CoV-2 specific human mAbs from single B cells

Single B cell technique	Ag used for cell sorting	Feeder layer stimulation	Functional screen on instrument	Sequencing technique (cDNA used)	Screening, sequencing, cloning information
Beacon	S2P _{ecto} +/- S _{RBD}	+	S2P _{ecto} binding	PacBio SMRT or Sanger (PCR amplicon)	<p>Cells loaded to instrument: ~14,000</p> <p>Cells in pens for screen: ~4,000</p> <p>% Ag-reactive: ~55%</p> <p>Cells exported: 288</p> <p>V_H:V_L paired sequences recovered: 156</p> <p>mAbs cloned and expressed: 96</p> <p>Ag-reactive mAbs: 78</p> <p>Directly cloned cDNA in pMCis_G1 vector</p>
			RBD-mFc binding		
			RBD-mFc binding + ACE2 blocking		
Chromium	S2P _{ecto}	+	na	Illumina Novaseq (Chromium libraries)	<p>Cells sequenced: ~4,500 unstimulated ~40,000 stimulated</p> <p>Number of mAbs synthesized: 761</p> <p>Ag-reactive mAbs: 311</p> <p>% Ag-reactive synthesized mAbs: ~41%</p> <p>Synthesized cDNA in pTwist-mCis_G1 vector</p>
		-			
	S _{RBD}	+			
		-			

Supplemental Table 2. Summary of electron microscopy data collection and statistics SARS-CoV-2 S2P_{ecto} protein		
Microscope setting	Microscope	TF-20
	Voltage (kV)	200
	Detector	US-4000 CCD
	Magnification	50,000×
	Pixel size	2.18
	Exposure (e-/Å ²)	25
	Defocus range (μm)	1.5 to 1.8
Data	Micrographs, #	122
	Particles, #	3,836
	Particles, # after 2D	2,718
	Final particles, #	2,188
	Symmetry	C1

Supplemental Table 3. Human subjects studied in this paper

Subject type	Subject	Age (years)	Sex	City where infected	Date of symptom onset	Date of blood sample collection (days after symptom onset)
COVID-19	1	35	M	Wuhan	Jan. 15, 2020	February 19, 2020 (35 days)
	2	52	F	Beijing	Feb. 1, 2020	March 8, 2020 (36 days)
	3	56	M	Wuhan	Jan. 20, 2020	March 10, 2020 (50 days)
	4	56	F	Wuhan	Jan. 20, 2020	March 10, 2020 (50 days)
Healthy donors	5	58	M	na	na	March 12, 2020 (na)
	6	Unknown	Unknown	na	na	Unknown, commercially sourced healthy donor sample

na: indicates not applicable