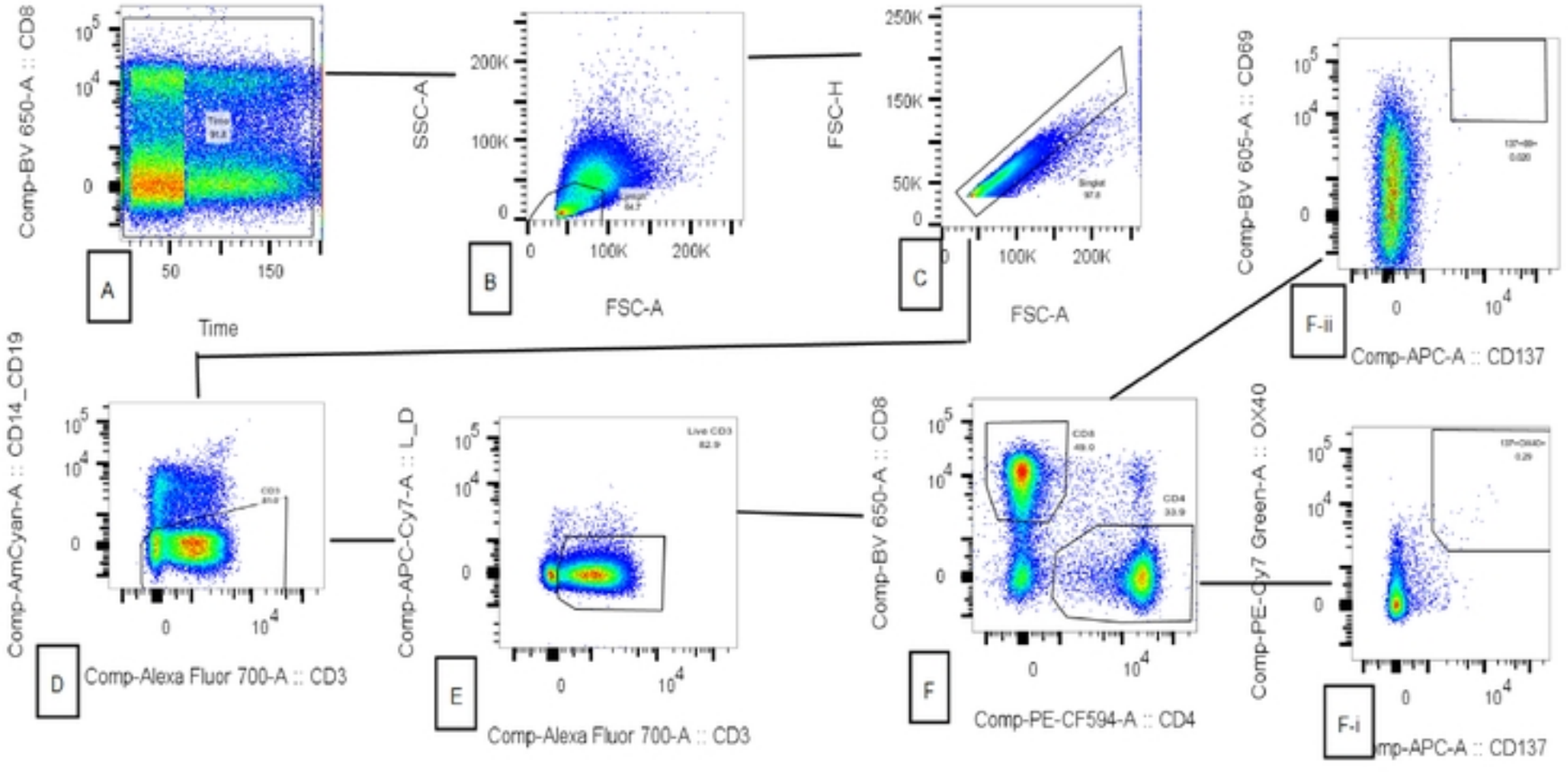
Supplementary Table S1: AIM antibodies used for cell staining

Membrane Antibody		Fluorochrome	Clone/vendor/catalog
1	CD45RA	BV421	HI100/Biolegend/304130
2	CD14	V500	M5E2/BD/561391
3	CD19	V500	HIB19/BD/561121
4	Live/Dead		
5	CD8	BV650	RPA-T8/BioLegend/301042
6	CD4	PE-CF594	RPA-T4RUO/BD/62316
8	CCR7	FITC	G043H7/Biolegend/353216
9	CD69	PE	FN50/BD/555531
10	OX40	PE-Cy7	Ber-ACT35/Biolegend/350012
11	CD137	APC	4B4-1/BioLegend/309810
12	CD3	AF700	UCHT1/eBioscience/56-0038-42

Supplementary Table S2: Hospitalized COVID + samples

COVID cohort, n=3	CD4+ T cell Reactivity	% CD4+ Reactivity	CD8+ T cell Reactivity	% CD8 Reactivity
CD4_Non-spike	2	66.7%	1	33.3%
CD4_Spike	2	66.7%	2	66.7%
CD8_A	3	100.0%	3	100.0%
CD8_B	3	100.0%	1	33.3%
Total Pools Reactive				
0	0	0.0%	0	0.0%
1	0	0.0%	1	33.3%
2	1	33.3%	1	33.3%
3	0	0.0%	0	0.0%
4	2	66.7%	1	33.3%



Supplementary Figure S1: Gating strategy (A-F) for detection of SARSD-CoV-2 reactive CD4+ and CD8+ cells after PBMC stimulation: Time gating was done to eliminate any artifact like air bubble (**A**), followed by a selection of lymphocyte population (**B**), and singlets (**C**). Live CD3+ cells were selected (**D-E**), then divided into CD4+ and CD8+ cells (**F**). Within CD4 and CD8 subsets, antigen-specific T cells were established through the upregulation of activation-induced markers OX40, CD69, and CD137. Percentages of OX40+CD137+ double-positive cells within the CD4 gate (**F-i**) and percentage of CD69+CD137+ within the CD8 gate (**F-ii**) showing activated cells, were gated out to be used for further analysis