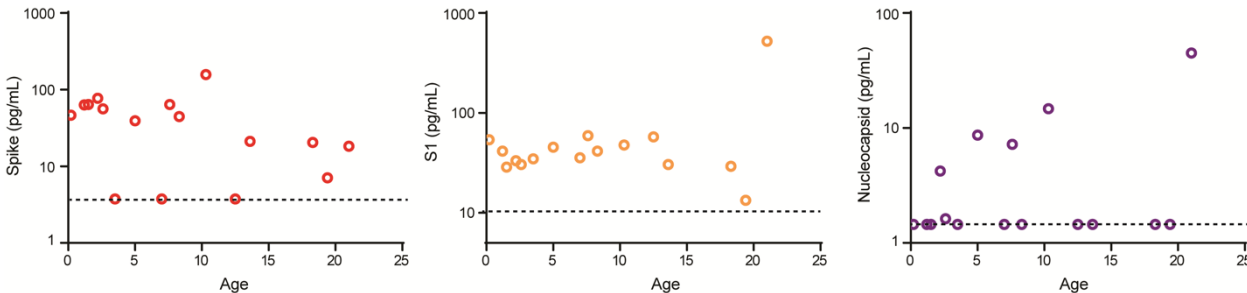


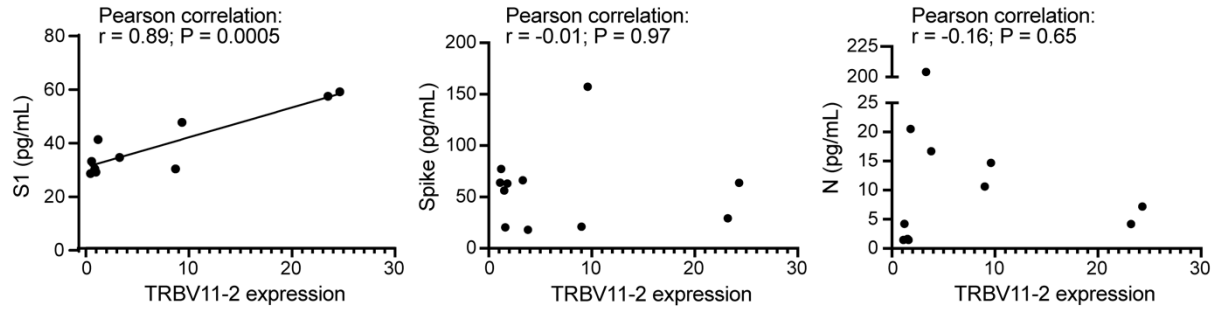
Supplemental Table 1: Age, sex, and clinical criteria, including stool SARS-CoV-2 viral load, for the 19 children diagnosed with MIS-C.

Patients with MIS-C, N=19	Age (years)	Sex	Past medical history	Clinical presentation of MIS-C	Gastrointestinal symptoms	Prior/current nasal SARS-CoV-2 (+) RT-PCR	SARS-CoV-2 (+) serology	COVID-19 exposure	Stool SARS-CoV-2 (RNA copies/mL)
1	2	F	none	(+)	decreased appetite	(+) prior	(+)	(+)	0
2	19	M	ulcerative colitis	(+)	diarrhea, weight loss, hematochezia	(-) on admission	(+)	unknown	0
3	7	F	none	(+)	abdominal pain, vomiting, diarrhea	(+) on admission	(+)	unknown	3.0E+02
4	12	M	none	(+)	abdominal pain, vomiting, diarrhea	(-) on admission	(+)	(+)	0
5	10	M	none	(+)	nausea, vomiting, rash	(+) prior	(+)	(+)	n/a
6	0.2	M	none	(+)	none	(+) prior	negative	(+)	2.5E+07
7	0.17	F	none	(+)	vomiting	(+) prior	(+)	(+)	n/a
8	3	M	none	(+)	diarrhea, decrease appetite	(-) on admission	(+)	(+)	n/a
9	13	M	none	(+)	nausea, abdominal pain	(+) on admission	(+)	unknown	2.9E+02
10	2	M	none	(+)	diarrhea	(-) on admission	negative	(+)	0
11	8	M	none	(+)	nausea, vomiting, diarrhea	(+) on admission	(+)	unknown	n/a
12	21	M	obesity	(+)	abdominal pain	(-) on admission	(+)	unknown	0
13	18	F	none	(+)	abdominal pain, fever, vomiting	(+) prior	(+)	(+)	1.5E+02
14	1	F	none	(+)	diarrhea, decrease appetite	(-) on admission	(+)	unknown	3.2E+02
15	5	F	none	(+)	nausea, vomiting, rash, decreased appetite	(+) prior	(+)	(+)	n/a
16	7	M	none	(+)	nausea, vomiting, decreased appetite	(+) prior	(+)	(+)	n/a
17	1	M	asthma	(+)	decreased appetite	(-) on admission	(+)	unknown	n/a
18	14	M	seizure disorder, obesity	(+)	none	(-) on admission	(+)	(+)	1.7E+03
19	1	M	genetic disorder, biliary atresia, developmental delay	(+)	diarrhea	(+) prior	(+)	(+)	1.0E+03

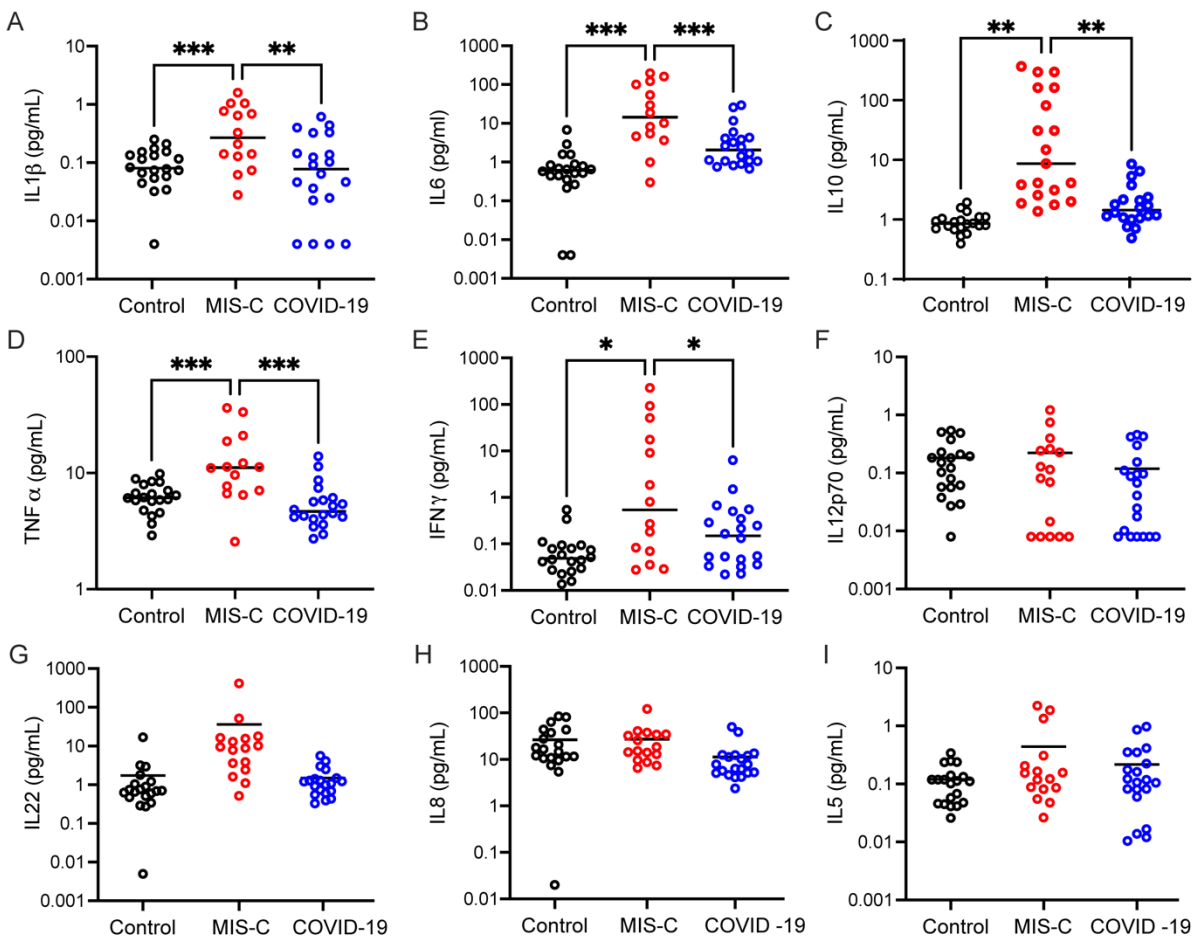
Supplemental Figure 1: S1, Spike, and Nucleocapsid levels in MIS-C patients plotted against age. One data point is plotted per patient. For patients with more than one sample collection, the sample with the highest antigen concentration was selected for these plots. Dotted lines represents the limit of detection.



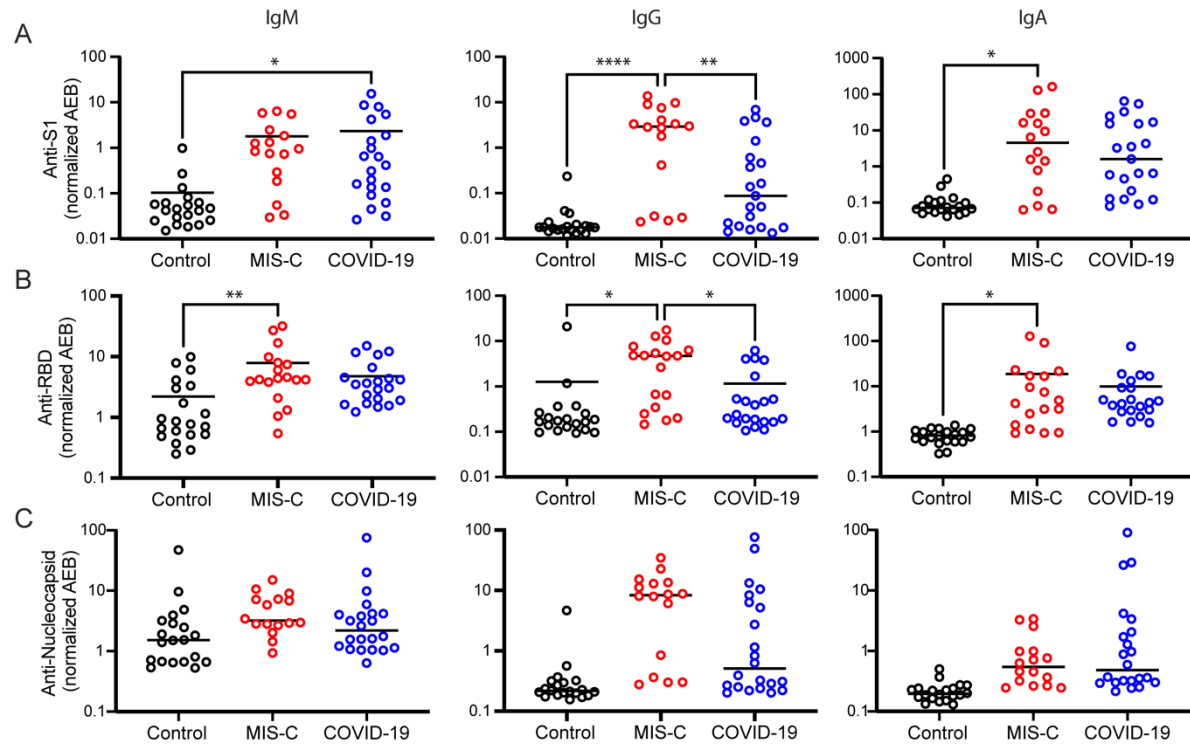
Supplemental Figure 2: Correlation of SARS-CoV-2 antigens with TRBV11-2 expression. A single S1 outlier was identified by Grubb's test and removed for Pearson correlation analysis.



Supplemental Figure 3: Peak cytokines measured from children presenting with MIS-C, acute COVID-19, or healthy controls: A) IL1 β , B) IL6, C) IL10, D) TNF α , E) IFN γ , F) IL12p70, G) IL22 H) IL8, I) IL5. Values were compared using one-way ANOVA with Tukey's multiple comparisons. Mean values are presented. *** P<0.001, ** P<0.01, * P<0.05



Supplemental Figure 4: A) Anti-S1 IgM, IgG, and IgA, B) Anti-RBD IgM, IgG, IgA, and C) Anti-Nucleocapsid IgM, IgG, and IgA were compared from children presenting with MIS-C, acute COVID-19, or healthy controls. Values were compared using one-way ANOVA with Tukey's multiple comparisons. Mean values are presented. **** $P < 0.0001$, ** $P < 0.01$, * $P < 0.05$.



Supplemental Figure 5: A) SARS-CoV-2 Spike, B) S1, and C) Nucleocapsid levels in the plasma of children with MIS-C were quantified throughout the course of illness: from time of symptom onset through 4-6 month follow up appointment. Shaded regions signify limit of detection for each specific antigen test. D) 11 of the MIS-C patients presented here provided longitudinal sampling for analysis.

