

Supplementary Material

Table S1. The demography of two cohorts in this study.

	Infection cohort	Vaccinated Cohort
Total N	45	30
Maternal Age (range)	29.9 ± 4.4 (20-38)	33.0 ± 3.4 (25 – 42)
Race (%)		
American Indian	1 (2.1%)	0
Asian	0	1 (3.3%)
Black	2 (4.2%)	0
White	40 (85.1%)	29 (96.7%)
Other	2 (4.2%)	0
More than One	1 (2.1%)	0
Prefer not to Answer	1 (2.1%)	0
Ethnicity (%)		
Hispanic	12 (25.5%)	0
Non-Hispanic	24 (51.1%)	26 (86.7%)
Not reported	11 (23.4%)	4 (13.3%)
BMI (kg/m2) (range)	28.8 ± 6.4 (20.2 – 45.2)	27.1 ± 6.8 (19.9 - 45.1)
Parity	2.2 ± 1.1	2.3 ± 1.3
Birth Weight (g) (range)	3473 ± 439 (2735 - 4621)	3236 ± 540 (1644 - 4046)
Infant sex		
Male	24 (51%)	13 (43.3%)
Female	23 (49%)	17 (56.7%)
Infant age (months) (range)	3.1 ± 2.2 (0.2 – 9.0)	7.5 ± 5.2 (0.5 – 23.4)
Breastfeeding Exclusivity at day0 or post dose 1	0.92 ± 0.18	0.96 ± 0.15
HM feeds (%)	36/46 (78%)	27/30 (90%)
Vaccine		
BNT162b2 (Pfizer-BioNTech)		12 (40%)
mRNA-1273 (Moderna)		18 (60%)
Household Member Diagnosed COVID-19	28/47 (59.6%)	5/30 (16.7%)
Infant Ever Tested	17 (36%)	13/30 (43%)
Infant Ever Diagnosed	9 (53% tested, 19% total)	2/13 (15% tested, 6.7% total)

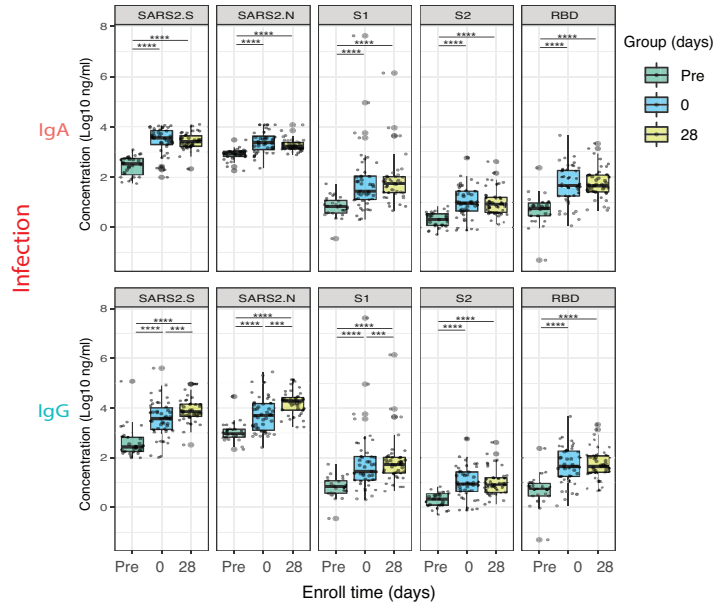


Figure S1. Supplementary figure 1: Anti-SARS-CoV-2 IgG serum antibody response after SARS-CoV-2 infection. In the infection cohort, the IgG antibodies in fingerstick blood samples had evaluated by mPLEX-CoV assay. All samples were tested at the same time in duplicate, and significant results were calculated with generalized linear mixed-effects models (**** $P < 0.0001$, *** $P < 0.001$, ** $P < 0.01$, * $P < 0.05$).

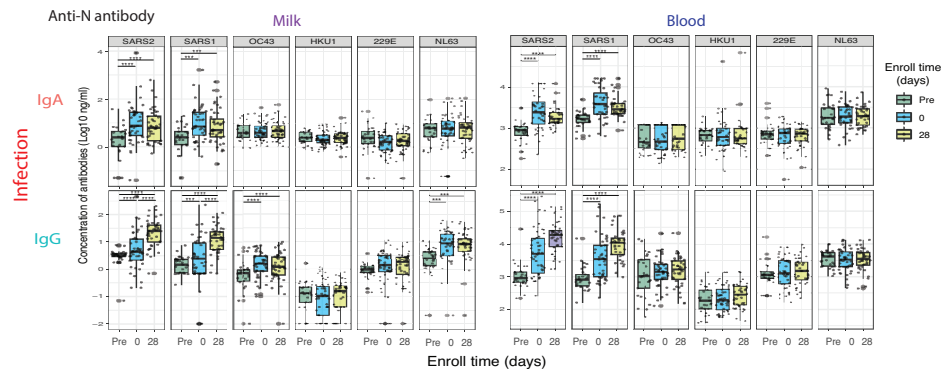


Figure S2. Supplementary figure 2: Anti-N HCoV antibody response in human milk and blood after SARS-CoV-2 infection. In the infection cohort, the anti-N IgG antibodies against SARS2, SARS1, and other common coronaviruses (HCoVs) in the milk and fingerstick blood samples had evaluated by mPLEX-CoV assay. All samples were tested at the same time in duplicate, and significant results were calculated with generalized linear mixed-effects models (**** $P < 0.0001$, *** $P < 0.001$, ** $P < 0.01$, * $P < 0.05$).

Table S2. The mPlex-CoV assay panel of human coronaviruses.

Type	Coronavirus	Protein	Abbreviation	textbfGene Acc
β	SARS-CoV-2	S	SARS2	EPI_ISL_402124
	SARS-CoV-1	Protein	SARS1	NC_004718.3
	HCoV-OC43		OC43	KX344031.1
	HCoV-HKU1		HKU1	AY597011
α	HCoV-229E		229E	KY369911.1
	HCoV-NL63		NL63	NC_005831.2
β	SARS-CoV-2	N	SARS2	EPI_ISL_402124
	SARS-CoV-1	Protein	SARS1	NC_004718.3
	HCoV-OC43		OC43	KX344031.1
	HCoV-HKU1		HKU1	AY597011
α	HCoV-229E		229E	KY369911.1
	HCoV-NL63		NL63	NC_005831.2

^a Spike (S) proteins of human coronaviruses are recombinant proteins expression by the baculovirus system with the trimerization domain at the C-terminal with His-tag.

^b Nucleocapsid proteins of human coronaviruses are recombinant proteins with C-terminal His-tag .