

Supplementary Online Content

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This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. Maternal and Cord Anti-Spike (S) Antibody Levels by Early Preterm, Late Preterm, and Term

	Total	Early Preterm <34 weeks GA	Late Preterm ≥34 - <37 weeks GA	Term ≥37 weeks GA	P-value
Overall	n=220	n=7	n=29	n=184	
Maternal anti-S	2070 (1682-2547)	2635 (958-7250)	4837 (2860-8183)	1794 (1429-2252)	0.005
Cord anti-S	2817 (2338-3395)	2557 (999-6542)	6011 (3671-9842)	2509 (2046-3076)	0.01
Ratio	1.36 (1.28-1.44)	0.97 (0.57-1.66)	1.24 (1.06-1.45)	1.40 (1.31-1.49)	0.34

Notes: Geometric mean concentrations (95% confidence intervals); maternal and cord anti-spike antibody levels compared using Kruskal Wallis rank test for non-normal continuous variables; ratio is calculated from untransformed values as cord anti-spike antibody concentration divided by maternal anti-spike antibody concentration and compared using one-way ANOVA for normally distributed continuous variables

Abbreviations: anti-S = anti-Spike antibody; GA = gestational age

eTable 2. Linear Regression Analyses of the Association Between Preterm Birth and Maternal and Cord Anti-Spike (S) Antibody Levels, Adjusted for Gestational Age at Last Dose, Time Between Last Dose and Delivery, and Number of Doses Prior to Delivery

	β -coefficient (95% CI)	P-value	*Adjusted β - coefficient (95% CI)	P-value	+Adjusted β - coefficient (95% CI)	P-value
Maternal Anti-S						
Term	0.0 (ref)	-	0.0 (ref)	-	0.0 (ref)	-
Preterm	1.26 (0.47-2.05)	0.002	0.47 (-0.17-1.12)	0.150	0.44 (-0.21-1.10)	0.182
Cord Anti-S						
Term	0.0 (ref)	-	0.0 (ref)	-	0.0 (ref)	-
Preterm	1.02 (0.30-1.74)	0.005	0.28 (-0.31-0.87)	0.343	0.26 (-0.34-0.86)	0.397
Ratio: cord/maternal anti-S						
Term	0.0 (ref)	-	0.0 (ref)	-	0.0 (ref)	-
Preterm	-0.22 (-0.42 to -0.03)	0.025	-0.17 (-0.40-0.06)	0.139	-0.17 (-0.40-0.06)	0.153

*Adjusted for GA at last dose, time between last dose and delivery (weeks), and number of doses prior to delivery

+Adjusted for GA at last dose, time between last dose and delivery (weeks), number of doses prior to delivery, insurance (private/other), and immunocompromising drugs (yes/no)

Abbreviations: CI = confidence interval; GA = gestational age; anti-S = anti-Spike antibody

eTable 3. Maternal and Cord Anti-Spike (S) Antibody Levels by Number of Doses During Pregnancy

	Total	Preterm	Term	P-value
Overall	n=220	n=36	n=184	
Maternal anti-S	2070 (1682-2547)	4299 (2733-6762)	1794 (1429-2252)	0.002
Cord anti-S	2817 (2338-3395)	5090 (3300-7850)	2509 (2046-3076)	0.007
Ratio	1.36 (1.28-1.44)	1.18 (1.02-1.38)	1.40 (1.31-1.49)	0.025
0-1 Doses	n=75	n=27	n=48	
Maternal anti-S	5548 (4162-7396)	4661 (2832-7669)	6120 (4262-8788)	0.26
Cord anti-S	7232 (5473-9554)	5731 (3497-9392)	8242 (5848-11616)	0.14
Ratio	1.30 (1.18-1.43)	1.23 (1.03-1.47)	1.35 (1.20-1.51)	0.41
2 Doses	n=121	n=7	n=114	
Maternal anti-S	826 (674-1013)	3237 (803-13051)	760 (624-925)	0.011
Cord anti-S	1248 (1038-1501)	3315 (997-11026)	1176 (980-1410)	0.031
Ratio	1.51 (1.42-1.61)	1.02 (0.66-1.59)	1.55 (1.46-1.64)	0.011
3+ Doses	n=24	n=2	n=22	
Maternal anti-S	9730 (5959-15887)	3894*	10574 (6713-16657)	0.71
Cord anti-S	8953 (6127-13081)	4603*	9511 (6750-13399)	0.68
Ratio	0.92 (0.69-1.23)	1.18*	0.90 (0.66-1.23)	0.76

Notes: geometric mean concentration (95% confidence interval); maternal and cord anti-S antibody compared using Wilcoxon rank sum test; ratio is calculated as cord anti-spike antibody level divided by maternal anti-spike antibody level and compared using t-test for normally distributed continuous variables.

*95% CIs not computed for participants with preterm birth and 3+ doses during pregnancy due to small numbers.

Abbreviations: anti-S = anti-Spike antibody

eFigure. Scatterplot and Lowess Smoothing Line for the Relationship Between Time Between Last Dose and Delivery and Cord:Maternal Anti-Spike (S) Antibody Ratios by Preterm Status, Stratified by Number of Doses

