

Supplementary Table S1. Summary of the analysis of the individual antibody classes in patient cohorts over time. The statistical evaluation compares the data from Cohort A and Cohort B. The normality was tested using the Shapiro–Wilk test. Normally distributed data were analyzed using non-parametric t-test. Non-normally distributed data were analyzed by Kruskal–Wallis test with post hoc Mann–Whitney test. The differences were considered significant when $p \leq 0.05$.

		IgA			IgM			IgG		
		Cohort A	Cohort B	p value	Cohort A	Cohort B	p value	Cohort A	Cohort B	p value
Admission	Positive*	52.17	NA	NA	37.2	NA	NA	28,99	NA	NA
	Borderline*	7.24	NA		5.31	NA		6.76	NA	
	Negative*	40.59	NA		57.49	NA		64.25	NA	
	Pos avg	6.52	NA		4.38	NA		4.93	NA	
	Pos med	5.59	NA		3.41	NA		4.02	NA	
Week 2	Positive*	98.75	NA	NA	77.75	NA	NA	95.00	59.12	<0.0001
	Borderline*	0.00	NA		5.00	NA		2.50	13.14	
	Negative*	1.25	NA		17.25	NA		2.50	27.74	
	Pos avg	9.98	NA		5.07	NA		7.34	3.09	
	Pos med	10.95	NA		4.11	NA		7.55	2.69	
Month 3	Positive*	90.52	69.16	<0.0001	14.66	2.80	0.0028	94.83	86.84	<0.0001
	Borderline*	5.17	11.21		6.90	3.74		0.86	2.63	
	Negative*	4.31	19.63		78.44	93.46		4.31	10.53	
	Pos avg	6.74	2.70		2.10	2.84		6.75	3.96	
	Pos med	5.68	2.00		1.85	2.92		7.07	6.67	
Month 6	Positive*	97.62	86.30	<0.0001	7.14	0.00	0.0033	98.81	82.19	<0.0001
	Borderline*	2.38	4.11		5.95	5.48		0.00	4.11	
	Negative*	0.00	9.59		86.91	94.52		1.19	13.70	
	Pos avg	9.31	5.89		1.97	0.00		8.27	6.42	
	Pos med	10.21	5.54		2.11	0.00		9.41	7.99	
Month 9	Positive*	92.31	78.26	<0.0001	5.13	2.42	0.2152	97.44	76.61	<0.0001
	Borderline*	7.69	5.65		2.56	3.23		0.00	9.68	
	Negative*	0.00	16.09		92.31	94.35		2.56	13.71	
	Pos avg	8.80	5.68		1.55	1.91		7.88	5.26	
	Pos med	9.96	4.17		1.55	2.10		9.94	4.41	
Month 12	Positive*	96.70	88.44	0.095	5.49	0.70	0.1098	96.70	88.44	<0.0001
	Borderline*	1.10	4.76		0.00	0.70		1.10	3.08	
	Negative*	2.20	6.80		94.51	98.60		2.20	8.48	
	Pos avg	8.35	7.94		1.68	2.73		8.52	7.01	
	Pos med	9.88	7.92		1.13	2.73		9.30	8.40	

Notes: * percentage of patients; Cohort A - hospitalized patients; Cohort B - non hospitalized patients; NA - not applicable; Pos avg – average of positive results; Pos med – median value of positive results

Supplementary Table S2a. Summary of the analysis of the individual antibody classes in patient cohorts affected by the vaccination or re-infection. The statistical evaluation compares the data from non-vaccinated patients to samples from vaccinated population in both Cohort A and Cohort B. The normality was tested using the Shapiro–Wilk test. Normally distributed data were analyzed using non-parametric t-test. Non-normally distributed data were analyzed by Kruskal–Wallis test with post hoc Mann–Whitney test. The differences were considered significant when $p \leq 0.05$.

		NON - VACCINATED/NON-REINFECTED						VACCINATED											
		IgA		IgM		IgG		IgA				IgM				IgG			
		Coh A	Coh B	Coh A	Coh B	Coh A	Coh B	Coh A	p value	Coh B	p value	Coh A	p value	Coh B	p value	Coh A	p value	Coh B	p value
Month 6	positive*	91.67	76.32	12.50	0.00	95.83	71.05	100.00	<0.0001	97.06	<0.0001	5.17		0.00		100.00	<0.0001	97.06	<0.0001
	borderline*	8.33	7.89	4.17	2.63	0.00	5.26	0.00		0.00		6.90		8.82		0.00		0.00	
	negative*	0.00	15.79	83.33	97.37	4.17	23.69	0.00		2.94		87.93		91.18		0.00		2.94	
	Pos avg	5.14	3.65	2.07	0.00	5.29	3.79	10.87		7.83		1.86		0.00		9.35		8.44	
	Pos med	4.45	1.73	2.09	0.00	5.49	2.41	11.32		7.41		2.13		0.00		9.66		8.98	
Month 9	positive*	87.5	67.86	0.00	3.57	100.00	65.48	95.65	0.0131	96.97	<0.0001	8.70		0.00	0.0012	95.65	0.0026	96.97	<0.0001
	borderline*	12.5	8.33	0.00	3.57	0.00	14.29	0.00		0.00		4.35		0.00		0.00		0.00	
	negative*	0.00	23.81	100.00	92.86	0.00	20.23	4.35		3.03		86.95		100.00		4.35		3.03	
	Pos avg	7.07	3.70	0.00	1.91	5.45	3.21	9.90		8.94		1.54		0.00		9.65		9.02	
	Pos med	6.10	2.98	0.00	2.10	4.03	2.86	12.40		8.89		1.54		0.00		10.41		9.36	
Month 12	positive*	87.5	74.00	0.00	2.00	87.5	66.00	100.00	<0.0001	96.74	<0.0001	5.41		0.00		100.00	0.0002	100.00	<0.0001
	borderline*	6.25	12.00	6.25	0.00	6.25	8.00	0.00		0.00		0.00		1.10		0.00		0.00	
	negative*	6.25	14.00	93.75	98.00	6.25	26.00	0.00		3.26		94.59		98.90		0.00		0.00	
	Pos avg	4.94	4.13	0.00	2.73	5.38	3.15	8.98		9.30		1.84		0.00		9.09		8.45	
	Pos med	3.39	3.37	0.00	2.73	3.71	2.38	9.99		9.92		1.68		0.00		9.44		9.16	

Notes: * percentage of patients; Coh A – Cohort A (hospitalized patients); Coh B – Cohort B (non hospitalized patients); NA - not applicable; Pos avg – average of positive results; Pos med – median value of positive results

Supplementary Table S2b. Summary of the analysis of the individual antibody classes in patient cohorts affected by the vaccination. The statistical evaluation compares the data from patients vaccinated ≤ 4 months with data of those vaccinated ≥ 5 months in both Cohort A and Cohort B. The normality was tested using the Shapiro–Wilk test. Normally distributed data were analyzed using non-parametric t-test. Non-normally distributed data were analyzed by Kruskal–Wallis test with post hoc Mann–Whitney test. The differences were considered significant when $p \leq 0.05$.

		VACCINATED <=4M						VACCINATED >=5 M											
		IgA		IgM		IgG		IgA				IgM				IgG			
		Coh A	Coh B	Coh A	Coh B	Coh A	Coh B	Coh A	<i>p value</i>	Coh B	<i>p value</i>	Coh A	<i>p value</i>	Coh B	<i>p value</i>	Coh A	<i>p value</i>	Coh B	<i>p value</i>
Month 9	positive*	100.00	100.00	11.11	0.00	100.00	100.00	80.00	0.2032	90,91	0.0033	0.00	0.3530	0.00	0.4446	80.00	0.0089	90.91	0.0042
	borderline*	0.00	0.00	5.56	0.00	0.00	0.00	20.00		0.00		0.00		0.00		0.00			
	negative*	0.00	0.00	83.33	100.00	0.00	0.00	0.00		9,09		100.00		100.00		20.00		9.09	
	Pos avg	10.10	10.21	1.54	0.00	10.01	9.44	7.66		6.15		0.00		0.00		8.00		8.11	
	Pos med	12.73	11.84	1.54	0.00	10.58	9.59	6.72		6.02		0.00		0.00		9.83		8.58	
Month 12	positive*	100.00	100.00	7.41	0.00	100.00	100.00	97.87	0.0009	93.18	< 0.0001	4.44	0.9163	0.00	0.2321	97.87	0.0399	100.00	0.0061
	borderline*	0.00	0.00	0.00	2.08	0.00	0.00	0.00		0.00		0.00		0.00		0.00			
	negative*	0.00	0.00	92.59	97.92	0.00	0.00	2.23		6.82		95.56		100.00		2.23		0.00	
	Pos avg	9.59	10.96	2.00	0.00	9.23	9.03	8.62		7.36		1.68		0.00		9.01		7.81	
	Pos med	11.46	11.58	2.00	0.00	7.72	9.43	9.92		7.23		1.68		0.00		9.20		8.40	

Notes: * percentage of patients; Coh A – Cohort A (hospitalized patients); Coh B – Cohort B (non hospitalized patients); Pos avg – average of positive results; Pos med – median value of positive results

Supplementary Table S2c. Summary of the analysis of the individual antibody classes in patient cohorts affected by re-infection. The table shows the data from non-vaccinated patients to samples from non-vaccinated patients with serologically marks of re-infection in both Cohort A and Cohort. The statistical analysis was not performed for low sample numbers.

		NON - VACCINATED/NON-REINFECTED						NON-VACCINATE/REINFECTED					
		IgA		IgM		IgG		IgA		IgM		IgG	
		Coh A	Coh B	Coh A	Coh B	Coh A	Coh B	Coh A	Coh B	Coh A	Coh B	Coh A	Coh B
Month 6	positive*	91.67	76.32	12.50	0.00	95.83	71.05	100.00	100.00	0.00	0.00	100.00	100.00
	borderline*	8.33	7.89	4.17	2.63	0.00	5.26	0.00	0.00	0.00	0.00	0.00	0.00
	negative*	0.00	15.79	83.33	97.37	4.17	23.69	0.00	0.00	100.00	100.00	0.00	0.00
	Pos avg	5.14	3.65	2.07	0.00	5.29	3.79	9.37	6.59	0.00	0.00	8.45	5.16
	Pos med	4.45	1.73	2.09	0.00	5.49	2.41	9.37	6.59	0.00	0.00	8.45	5.16
Month 9	positive*	87.5	67.86	0.00	3.57	100.00	65.48	NA	100.00	NA	0.00	NA	100.00
	borderline*	12.5	8.33	0.00	3.57	0.00	14.29	NA	0.00	NA	0.00	NA	0.00
	negative*	0.00	23.81	100.00	92.86	0.00	20.23	NA	0.00	NA	100.00	NA	0.00
	Pos avg	7.07	3.70	0.00	1.91	5.45	3.21	NA	7.53	NA	0.00	NA	4.84
	Pos med	6.10	2.98	0.00	2.10	4.03	2.86	NA	8.80	NA	0.00	NA	5.26
Month 12	positive*	87.5	74.00	0.00	2.00	87.5	66.00	100.00	100.00	0.00	0.00	100.00	100.00
	borderline*	6.25	12.00	6.25	0.00	6.25	8.00	0.00	0.00	0.00	0.00	0.00	0.00
	negative*	6.25	14.00	93.75	98.00	6.25	26.00	0.00	0.00	100.00	100.00	0.00	0.00
	Pos avg	4.94	4.13	0.00	2.73	5.38	3.15	10.62	10.37	0.00	0.00	10.81	6.04
	Pos med	3.39	3.37	0.00	2.73	3.71	2.38	10.62	11.78	0.00	0.00	10.80	7.10

Notes: * percentage of patients; Coh A – Cohort A (hospitalized patients); Coh B – Cohort B (non hospitalized patients); NA - not applicable; Pos avg – average of positive results; Pos med – median value of positive results

Supplementary Table S3. Summary of the virus neutralization test results at the individual time points in both cohorts. The numbers represents a proportion of samples in percents for with the indicated VNT levels.

Virus neutralization titer	Cohort A (%)	Cohort B (%)	
<40	56.10	NA	Admission
40	11.70	NA	
80	10.73	NA	
160-320	12.68	NA	
>640	8.79	NA	
<40	2.44	23.08	Week 2
40	8.54	18.46	
80	4.88	43.08	
160-320	51.22	12.31	
>640	32.92	3.07	
<40	6.36	28.16	Month 3
40	12.73	34.48	
80	18.18	21.26	
160-320	39.09	14.37	
>640	23.64	1.73	
<40	3.77	0.00	Month 6
40	1.89	0.00	
80	5.66	66.67	
160-320	9.43	33.33	
>640	79.25	0.00	
<40	0.00	36.90	Month 9
40	30.00	32.14	
80	40.00	14.29	
160-320	30.00	15.48	
>640	0.00	1.19	
<40	0.00	27.27	Month 12
40	14.29	9.09	
80	7.14	12.73	
160-320	14.29	18.18	
>640	64.29	32.73	