

THE LANCET

Infectious Diseases

Supplementary appendix 2

This appendix formed part of the original submission and has been peer reviewed.
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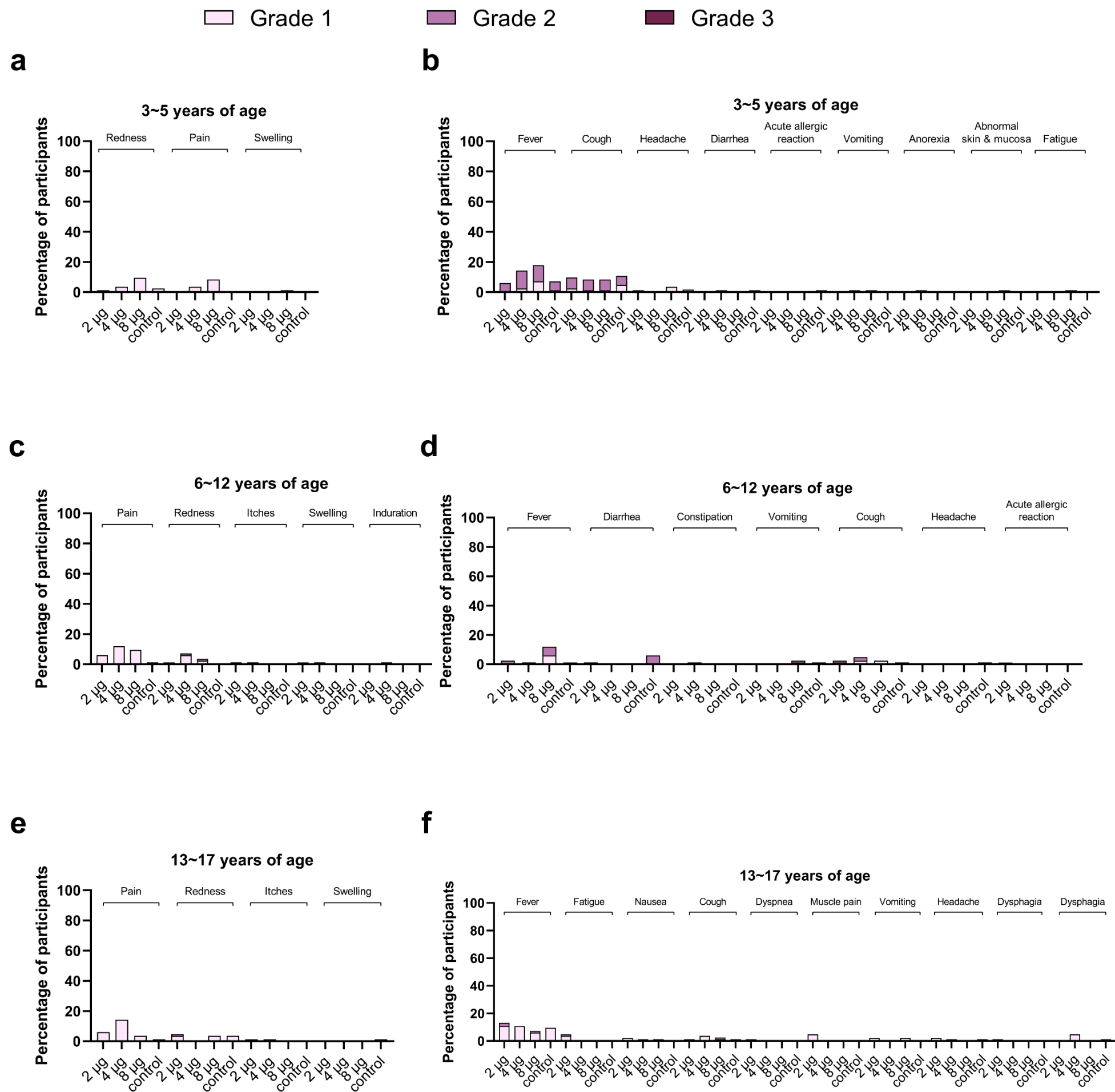
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Appendix 1. Adverse reactions within 30 days after whole vaccination procedure for 3~5, 6~12 and 13~17 year-old group in phase 1/2 (related to Figure 2~4).



Appendix 2. Adverse reactions within 7 days after each vaccination dose and total adverse reactions within 30 days after the first vaccination dose for 3~5 year-old group in phase 1/2

	2 µg cohort (n=111)			4 µg cohort (n=112)			8 µg cohort (n=112)			Total (n=335)		
	Vaccination (n=83)	control (n=28)	P value	Vaccination (n=84)	control (n=28)	P value	Vaccination (n=84)	control (n=28)	P value	Vaccination (n=251)	control (n=84)	P value
Injection site adverse reactions after the first dose												
Any	0(0.00%)	0(0.00%)	1	3(3.57%)	0(0.00%)	0.31	4(4.76%)	0(0.00%)	0.24	7(2.79%)	0(0.00%)	0.12
Grade 1	0(0.00%)	0(0.00%)	--	3(3.57%)	0(0.00%)	--	4(4.76%)	0(0.00%)	--	7(2.79%)	0(0.00%)	--
Grade 2	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--
Pain	0(0.00%)	0(0.00%)	1	3(3.57%)	0(0.00%)	0.31	3(3.57%)	0(0.00%)	0.31	6(2.39%)	0(0.00%)	0.15
Grade 1	0(0.00%)	0(0.00%)	--	3(3.57%)	0(0.00%)	--	3(3.57%)	0(0.00%)	--	6(2.39%)	0(0.00%)	--
Grade 2	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--
Redness	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	1(1.19%)	0(0.00%)	0.56	1(0.40%)	0(0.00%)	0.56
Grade 1	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	1(1.19%)	0(0.00%)	--	1(0.40%)	0(0.00%)	--
Grade 2	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--
Swelling	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1
Grade 1	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--
Grade 2	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--
Systemic adverse reactions after the first dose												
Any	10(12.05%)	0(0.00%)	0.054	14(16.67%)	8(28.57%)	0.17	16(19.05%)	4(14.29%)	0.57	40(15.94%)	12(14.29%)	0.72
Grade 1	3(3.61%)	0(0.00%)	--	5(5.95%)	2(7.14%)	--	7(8.33%)	3(1.71%)	--	15(5.98%)	5(5.95%)	--
Grade 2	7(8.43%)	0(0.00%)	--	9(1.71%)	6(21.43%)	--	9(10.71%)	1(3.57%)	--	25(9.96%)	7(8.33%)	--
Fever	4(4.82%)	0(0.00%)	0.24	7(8.33%)	2(7.14%)	0.84	11(13.10%)	1(3.57%)	0.16	22(8.76%)	3(3.57%)	0.17
Grade 1	0(0.00%)	0(0.00%)	--	2(2.38%)	0(0.00%)	--	4(4.76%)	0(0.00%)	--	6(2.39%)	0(0.00%)	--
Grade 2	4(4.82%)	0(0.00%)	--	5(5.95%)	2(7.14%)	--	7(8.33%)	1(3.57%)	--	16(6.37%)	3(3.57%)	--
Fatigue	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	1(1.19%)	0(0.00%)	0.56	1(0.40%)	0(0.00%)	0.56
Grade 1	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	1(1.19%)	0(0.00%)	--	1(0.40%)	0(0.00%)	--
Grade 2	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--
Cough	5(6.02%)	0(0.00%)	0.18	5(5.95%)	4(14.29%)	0.16	2(2.38%)	3(1.71%)	0.064	12(4.78%)	7(8.33%)	0.22
Grade 1	2(2.41%)	0(0.00%)	--	1(1.19%)	1(3.57%)	--	0(0.00%)	3(1.71%)	--	3(1.19%)	4(4.76%)	--
Grade 2	3(3.61%)	0(0.00%)	--	4(4.76%)	3(1.71%)	--	2(2.38%)	0(0.00%)	--	9(3.59%)	3(3.57%)	--
Headache	1(1.20%)	0(0.00%)	0.56	0(0.00%)	0(0.00%)	1	2(2.38%)	0(0.00%)	0.41	3(1.19%)	0(0.00%)	0.31
Grade 1	1(1.20%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	2(2.38%)	0(0.00%)	--	3(1.19%)	0(0.00%)	--
Grade 2	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--
Diarrhea	0(0.00%)	0(0.00%)	1	1(1.19%)	1(3.57%)	0.41	0(0.00%)	0(0.00%)	1	1(0.40%)	1(1.19%)	0.41
Grade 1	0(0.00%)	0(0.00%)	--	1(1.19%)	1(3.57%)	--	0(0.00%)	0(0.00%)	--	1(0.40%)	1(1.19%)	--
Grade 2	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--
Acute allergic reaction	0(0.00%)	0(0.00%)	1	0(0.00%)	1(3.57%)	0.082	0(0.00%)	0(0.00%)	1	0(0.00%)	1(1.19%)	0.083
Grade 1	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--
Grade 2	0(0.00%)	0(0.00%)	--	0(0.00%)	1(3.57%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	1(1.19%)	--
Vomiting	0(0.00%)	0(0.00%)	1	1(1.19%)	0(0.00%)	0.56	0(0.00%)	0(0.00%)	1	1(0.40%)	0(0.00%)	0.56
Grade 1	0(0.00%)	0(0.00%)	--	1(1.19%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	1(0.40%)	0(0.00%)	--
Grade 2	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--
Overall adverse reactions after the first dose												
Any	10(12.05%)	0(0.00%)	0.056	18(21.43%)	8(28.57%)	0.44	20(23.81%)	4(14.29%)	0.29	48(19.12%)	12(14.29%)	0.32
Grade 1	3(3.61%)	0(0.00%)	--	9(10.71%)	2(7.14%)	--	11(13.10%)	3(1.71%)	--	23(9.16%)	5(5.95%)	--
Grade 2	7(8.43%)	0(0.00%)	--	9(10.71%)	6(21.43%)	--	9(10.71%)	1(3.57%)	--	25(9.96%)	7(8.33%)	--

Data are n (%). Any refers to all the participants with any grade adverse reactions or reactions. Adverse reactions and reactions were graded according to the scale issued by the China State Food and Drug Administration. Grade 1=mild; Grade 2=moderate; Grade 3=severe.

Appendix 3. Adverse reactions within 7 days after each vaccination dose and overall adverse reactions within 30 days after the second vaccination dose for 3~5 year-old group in phase 1/2

	2 µg cohort (n=110)			4 µg cohort (n=110)			8 µg cohort (n=111)			Total (n=331)		
	vaccination (n=83)	control (n=27)	P value	vaccination (n=83)	control (n=27)	P value	vaccination (n=83)	control (n=28)	P value	vaccination (n=249)	control (n=82)	P value
Injection site adverse reactions after the second dose												
Any	1(1.20%)	1(3.70%)	0.40	1(1.20%)	0(0.00%)	0.56	2(2.41%)	1(3.70%)	0.73	4(1.61%)	2(2.44%)	0.62
Grade 1	1(1.20%)	1(3.70%)	--	1(1.20%)	0(0.00%)	--	2(2.41%)	1(3.70%)	--	4(1.61%)	2(2.44%)	--
Grade 2	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--
Pain	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	2(2.41%)	0(0.00%)	0.41	2(0.80%)	0(0.00%)	0.42
Grade 1	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	2(2.41%)	0(0.00%)	--	2(0.80%)	0(0.00%)	--
Grade 2	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--
Redness	1(1.20%)	1(3.70%)	0.40	1(1.20%)	0(0.00%)	0.57	0(0.00%)	1(3.70%)	0.084	2(0.80%)	2(2.44%)	0.24
Grade 1	1(1.20%)	1(3.70%)	--	1(1.20%)	0(0.00%)	--	0(0.00%)	1(3.70%)	--	2(0.80%)	2(2.44%)	--
Grade 2	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--
Systemic adverse reactions after the second dose												
Any	1(1.20%)	1(3.70%)	0.40	6(7.23%)	2(7.41%)	0.98	4(4.82%)	0(0.00%)	0.24	11(4.42%)	3(3.66%)	0.77
Grade 1	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	1(1.20%)	0(0.00%)	--	1(0.40%)	0(0.00%)	--
Grade 2	1(1.20%)	1(3.70%)	--	6(7.23%)	2(7.41%)	--	3(3.61%)	0(0.00%)	--	10(4.02%)	3(3.66%)	--
Fever	0(0.00%)	1(3.70%)	0.078	6(7.23%)	0(0.00%)	0.15	2(2.41%)	0(0.00%)	0.41	8(3.21%)	1(1.22%)	0.34
Grade 1	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	1(1.20%)	0(0.00%)	--	1(0.40%)	0(0.00%)	--
Grade 2	0(0.00%)	1(3.70%)	--	6(7.23%)	0(0.00%)	--	1(1.20%)	0(0.00%)	--	7(2.81%)	1(1.22%)	--
Fatigue	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1
Grade 1	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--
Grade 2	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--
Cough	1(1.20%)	0(0.00%)	0.57	0(0.00%)	0(0.00%)	1	2(2.41%)	0(0.00%)	0.41	3(1.20%)	0(0.00%)	0.32
Grade 1	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--
Grade 2	1(1.20%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	2(2.41%)	0(0.00%)	--	3(1.20%)	0(0.00%)	--
Overall adverse reactions after the second dose												
Any	2(2.41%)	2(7.41%)	0.23	7(8.43%)	2(7.41%)	1	6(7.23%)	2(7.41%)	0.98	15(6.02%)	6(7.32%)	0.68
Grade 1	1(1.20%)	1(3.70%)	--	6(7.23%)	0(0.00%)	--	3(3.61%)	1(3.70%)	--	10(4.02%)	2(2.44%)	--
Grade 2	1(1.20%)	1(3.70%)	--	1(1.20%)	2(7.41%)	--	3(3.61%)	1(3.70%)	--	5(2.01%)	4(4.88%)	--

Data are n (%). Any refers to all the participants with any grade adverse reactions or reactions. Adverse reactions and reactions were graded according to the scale issued by the China State Food and Drug Administration. Grade 1=mild; Grade 2=moderate; Grade 3=severe.

Appendix 4. Adverse reactions within 7 days after each vaccination dose and overall adverse reactions within 30 days after the third vaccination dose for 3~5 year-old group in phase 1/2

	2 µg cohort (n=109)			4 µg cohort (n=109)			8 µg cohort (n=111)			Total (n=329)		
	Vaccination (n=82)	control (n=27)	P value	Vaccination (n=83)	control (n=26)	P value	Vaccination (n=83)	control (n=28)	P value	Vaccination (n=248)	control (n=81)	P value
Injection site adverse reactions after the third dose												
Any	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	2(2.41%)	0(0.00%)	0.41	2(0.81%)	0(0.00%)	0.42
Grade 1	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	2(2.41%)	0(0.00%)	--	2(0.81%)	0(0.00%)	--
Grade 2	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--
Pain	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	2(2.41%)	0(0.00%)	0.41	2(0.81%)	0(0.00%)	0.42
Grade 1	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	2(2.41%)	0(0.00%)	--	2(0.81%)	0(0.00%)	--
Grade 2	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--
Systemic adverse reactions after the third dose												
Any	3(3.66%)	0(0.00%)	0.31	2(2.41%)	0(0.00%)	0.42	8(9.64%)	2(7.14%)	1	13(5.24%)	2(2.47%)	0.30
Grade 1	0(0.00%)	0(0.00%)	--	1(1.20%)	0(0.00%)	--	4(4.82%)	1(3.57%)	--	5(2.02%)	1(1.23%)	--
Grade 2	3(3.66%)	0(0.00%)	--	1(1.20%)	0(0.00%)	--	4(4.82%)	1(3.57%)	--	8(3.23%)	1(1.23%)	--
Fever	1(1.22%)	0(0.00%)	0.56	1(1.20%)	0(0.00%)	0.57	2(2.41%)	1(3.57%)	1	4(1.61%)	1(1.23%)	0.81
Grade 1	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	1(1.20%)	1(3.57%)	--	1(0.40%)	1(1.23%)	--
Grade 2	1(1.22%)	0(0.00%)	--	1(1.20%)	0(0.00%)	--	1(1.20%)	0(0.00%)	--	3(1.21%)	0(0.00%)	--
Fatigue	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1
Grade 1	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--
Grade 2	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--
Cough	2(2.44%)	0(0.00%)	0.41	0(0.00%)	0(0.00%)	1	3 (3.61%)	1(3.57%)	1	5(1.98%)	1(1.23%)	0.65
Grade 1	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	1(1.20%)	0(0.00%)	--	1(0.40%)	0(0.00%)	--
Grade 2	2(2.44%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	2(2.41%)	1(3.57%)	--	4(1.61%)	1(1.23%)	--
Anorexia	0(0.00%)	0(0.00%)	1	1(1.20%)	0(0.00%)	0.57	0(0.00%)	0(0.00%)	1	1(0.40%)	0(0.00%)	0.57
Grade 1	0(0.00%)	0(0.00%)	--	1(1.20%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	1(0.40%)	0(0.00%)	--
Grade 2	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--
Vomiting	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	1(1.20%)	0(0.00%)	0.56	1(0.40%)	0(0.00%)	0.57
Grade 1	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	1(1.20%)	0(0.00%)	--	1(0.40%)	0(0.00%)	--
Grade 2	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--
Abnormal skin and mucosa	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	1(1.20%)	0(0.00%)	0.56	1(0.40%)	0(0.00%)	0.57
Grade 1	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--
Grade 2	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	1(1.20%)	0(0.00%)	--	1(0.40%)	0(0.00%)	--
Headache	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	1(1.20%)	0(0.00%)	0.56	1(0.40%)	0(0.00%)	0.57
Grade 1	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	1(1.20%)	0(0.00%)	--	1(0.40%)	0(0.00%)	--
Grade 2	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--
Overall adverse reactions after the third dose												
Any	3(3.66%)	0(0.00%)	0.31	2(2.41%)	0(0.00%)	0.42	10(12.05%)	2(7.14%)	0.47	15(6.05%)	2(2.47%)	0.21
Grade 1	0(0.00%)	0(0.00%)	--	1(1.20%)	0(0.00%)	--	6(7.23%)	1(3.57%)	--	7(2.82%)	1(1.23%)	--
Grade 2	3(3.66%)	0(0.00%)	--	1(1.20%)	0(0.00%)	--	4(4.82%)	1(3.57%)	--	8(3.23%)	1(1.23%)	--

Data are n (%). Any refers to all the participants with any grade adverse reactions or reactions. Adverse reactions and reactions were graded according to the scale issued by the China

State Food and Drug Administration. Grade 1=mild; Grade 2=moderate; Grade 3=severe.

Appendix 5. Adverse reactions within 7 days after each vaccination dose and overall adverse reactions within 30 days after the first vaccination dose for 6~12 year-old group in phase 1/2

	2 µg cohort (n=112)			4 µg cohort (n=112)			8 µg cohort (n=112)			Total (n=336)		
	vaccination (n=84)	control (n=28)	P value	Vaccination (n=84)	control (n=28)	P value	vaccination (n=84)	control (n=28)	P value	Vaccination (n=252)	control (n=84)	P value
Injection site adverse reactions after the first dose												
Any	2(2.38%)	0(0.00%)	0.41	8(9.52%)	0(0.00%)	0.090	4(4.76%)	0(0.00%)	0.24	14(5.56%)	0(0.00%)	0.027
Grade 1	2(2.38%)	0(0.00%)	--	8(9.52%)	0(0.00%)	--	4(4.76%)	0(0.00%)	--	14(5.56%)	0(0.00%)	--
Pain	2(2.38%)	0(0.00%)	0.41	5(5.95%)	0(0.00%)	0.19	4(4.76%)	0(0.00%)	0.24	11(4.37%)	0(0.00%)	0.052
Grade 1	2(2.38%)	0(0.00%)	--	5(5.95%)	0(0.00%)	--	4(4.76%)	0(0.00%)	--	11(4.37%)	0(0.00%)	--
Redness	0(0.00%)	0(0.00%)	1	2(2.38%)	0(0.00%)	0.41	0(0.00%)	0(0.00%)	1	2(0.79%)	0(0.00%)	0.41
Grade 1	0(0.00%)	0(0.00%)	--	2(2.38%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	2(0.79%)	0(0.00%)	--
Induration	0(0.00%)	0(0.00%)	1	1(1.19%)	0(0.00%)	0.56	0(0.00%)	0(0.00%)	1	1(0.40%)	0(0.00%)	0.56
Grade 1	0(0.00%)	0(0.00%)	--	1(1.19%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	1(0.40%)	0(0.00%)	--
Systemic adverse reactions after the first dose												
Any	3(3.57%)	1(3.57%)	1	3(3.57%)	0(0.00%)	0.31	10(11.90%)	0(0.00%)	0.056	16(6.35%)	1(1.19%)	0.062
Grade 1	2(2.38%)	1(3.57%)	--	3(3.57%)	0(0.00%)	--	6(7.14%)	0(0.00%)	--	11(4.37%)	1(1.19%)	--
Grade 2	1(1.19%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	4(4.76%)	0(0.00%)	--	5(1.98%)	0(0.00%)	--
Fever	1(1.19%)	0(0.00%)	0.56	1(1.19%)	0(0.00%)	0.56	6(7.14%)	0(0.00%)	0.15	8(3.17%)	0(0.00%)	0.098
Grade 1	0(0.00%)	0(0.00%)	--	1(1.19%)	0(0.00%)	--	3(3.57%)	0(0.00%)	--	4(1.59%)	0(0.00%)	--
Grade 2	1(1.19%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	3(3.57%)	0(0.00%)	--	4(1.59%)	0(0.00%)	--
Diarrhea	1(1.19%)	0(0.00%)	0.56	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	1(0.40%)	0(0.00%)	0.56
Grade 1	1(1.19%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	1(0.40%)	0(0.00%)	--
Cough	1(1.19%)	0(0.00%)	0.56	1(1.19%)	0(0.00%)	0.56	2(2.38%)	0(0.00%)	0.41	4(1.59%)	0(0.00%)	0.25
Grade 1	1(1.19%)	0(0.00%)	--	1(1.19%)	0(0.00%)	--	2(2.38%)	0(0.00%)	--	4(1.59%)	0(0.00%)	--
Constipation	0(0.00%)	0(0.00%)	1	1(1.19%)	0(0.00%)	0.56	0(0.00%)	0(0.00%)	1	1(0.40%)	0(0.00%)	0.56
Grade 1	0(0.00%)	0(0.00%)	--	1(1.19%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	1(0.40%)	0(0.00%)	--
Vomiting	0(0.00%)	1(3.57%)	0.082	0(0.00%)	0(0.00%)	1	2(2.38%)	0(0.00%)	0.41	2(0.79%)	1(1.19%)	0.74
Grade 1	0(0.00%)	1(3.57%)	--	0(0.00%)	0(0.00%)	--	1(1.19%)	0(0.00%)	--	1(0.40%)	1(1.19%)	--
Grade 2	0(0.00%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	1(1.19%)	0(0.00%)	--	1(0.40%)	0(0.00%)	--
Overall adverse reactions after the first dose												
Any	5(5.95%)	1(3.57%)	0.58	11(13.10%)	0(0.00%)	0.044	15(17.86%)	0(0.00%)	0.016	30(11.90%)	1(1.19%)	0.0033
Grade 1	4(4.76%)	1(3.57%)	--	11(13.10%)	0(0.00%)	--	11(13.10%)	0(0.00%)	--	25(9.92%)	1(1.19%)	--
Grade 2	1(1.19%)	0(0.00%)	--	0(0.00%)	0(0.00%)	--	4(4.76%)	0(0.00%)	--	5(1.98%)	0(0.00%)	--

Data are n (%). Any refers to all the participants with any grade adverse reactions or reactions. Adverse reactions and reactions were graded according to the scale issued by the China State Food and Drug Administration. Grade 1=mild; Grade 2=moderate; Grade 3=severe.

Appendix 6. Adverse reactions within 7 days after each vaccination dose and overall adverse reactions within 30 days after the second vaccination dose for 6~12 year-old group in phase 1/2

	2 µg cohort (n=112)			4 µg cohort (n=112)			8 µg cohort (n=111)			Total (n=335)		
	vaccination (n=84)	control (n=28)	P value	vaccination (n=84)	control (n=28)	P value	vaccination (n=83)	control (n=28)	P value	vaccination (n=251)	control (n=84)	P value
Injection site adverse reactions after the second dose												
Any	2(2.38%)	0(0.00%)	0.41	7(8.33%)	0(0.00%)	0.11	6(7.23%)	0(0.00%)	0.14	15(6.00%)	0(0.00%)	0.022
Grade 1	2(2.38%)	0(0.00%)		7(8.33%)	0(0.00%)		5(6.02%)	0(0.00%)		14(5.58%)	0(0.00%)	
Grade 2	0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		1(1.20%)	0(0.00%)		1(0.40%)	0(0.00%)	
Pain	2(2.38%)	0(0.00%)	0.41	4(4.76%)	0(0.00%)	0.24	4(4.82%)	0(0.00%)	0.24	10(3.98%)	0(0.00%)	0.063
Grade 1	2(2.38%)	0(0.00%)		4(4.76%)	0(0.00%)		4(4.82%)	0(0.00%)		10(3.98%)	0(0.00%)	
Redness	0(0.00%)	0(0.00%)	1	1(1.19%)	0(0.00%)	0.56	2(2.41%)	0(0.00%)	0.41	3(1.20%)	0(0.00%)	0.31
Grade 1	0(0.00%)	0(0.00%)		1(1.19%)	0(0.00%)		1(1.20%)	0(0.00%)		2(0.80%)	0(0.00%)	
Grade 2	0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		1(1.20%)	0(0.00%)		1(0.40%)	0(0.00%)	
Itches	0(0.00%)	0(0.00%)	1	1(1.19%)	0(0.00%)	0.56	0(0.00%)	0(0.00%)	1	1(0.40%)	0(0.00%)	0.56
Grade 1	0(0.00%)	0(0.00%)		1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		1(0.40%)	0(0.00%)	
Swelling	0(0.00%)	0(0.00%)	1	1(1.19%)	0(0.00%)	0.56	0(0.00%)	0(0.00%)	1	1(0.40%)	0(0.00%)	0.56
Grade 1	0(0.00%)	0(0.00%)		1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		1(0.40%)	0(0.00%)	
Systemic adverse reactions after the second dose												
Any	3(3.57%)	2(7.14%)	0.43	2(2.38%)	1(3.57%)	0.74	3(3.61%)	0(0.00%)	0.31	8(3.19%)	3(3.57%)	0.86
Grade 1	0(0.00%)	1(3.57%)		0(0.00%)	0(0.00%)		2(2.41%)	0(0.00%)		2(0.80%)	1(1.19%)	
Grade 2	2(2.38%)	1(3.57%)		2(2.38%)	1(3.57%)		1(1.20%)	0(0.00%)		5(2.00%)	2(2.38%)	
Grade 3	1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		1(0.40%)	0(0.00%)	
Fever	1(1.19%)	0(0.00%)	0.56	0(0.00%)	1(3.57%)	0.082	3(3.57%)	0(0.00%)	0.31	4(1.59%)	1(1.19%)	0.79
Grade 1	0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		2(2.41%)	0(0.00%)		2(0.80%)	0(0.00%)	
Grade 2	1(1.19%)	0(0.00%)		0(0.00%)	1(3.57%)		1(1.20%)	0(0.00%)		2(0.80%)	1(1.19%)	
Cough	1(1.19%)	1(3.57%)	0.41	2(2.38%)	0(0.00%)	0.41	0(0.00%)	0(0.00%)	1	3(1.20%)	1(1.19%)	1
Grade 1	0(0.00%)	1(3.57%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	1(1.19%)	
Grade 2	1(1.19%)	0(0.00%)		2(2.38%)	0(0.00%)		0(0.00%)	0(0.00%)		3(1.20%)	0(0.00%)	
Headache	0(0.00%)	1(3.57%)	0.082	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	0(0.00%)	1(1.19%)	0.083
Grade 2	0(0.00%)	1(3.57%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	1(1.19%)	
Acute allergic reaction	1(1.19%)	0(0.00%)	0.56	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	1(0.40%)	0(0.00%)	1
Grade 3	1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		1(0.40%)	0(0.00%)	
Overall adverse reactions after the second dose												
Any	5(5.95%)	2(7.14%)	0.82	9(10.71%)	1(3.57%)	0.25	9(10.84%)	0(0.00%)	0.069	23(9.16%)	3(3.57%)	0.097
Grade 1	2(2.38%)	1(3.57%)		7(8.33%)	0(0.00%)		7(8.43%)	0(0.00%)		16(6.37%)	1(1.19%)	
Grade 2	2(2.38%)	1(3.57%)		2(2.38%)	1(3.57%)		2(2.41%)	0(0.00%)		6(2.40%)	2(2.38%)	
Grade 3	1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		1(0.40%)	0(0.00%)	

Data are n (%). Any refers to all the participants with any grade adverse reactions or reactions. Adverse reactions and reactions were graded according to the scale issued by the China State Food and Drug Administration. Grade 1=mild; Grade 2=moderate; Grade 3=severe.

Appendix 7. Adverse reactions within 7 days after each vaccination dose and overall adverse reactions within 30 days after the third vaccination dose for 6~12 year-old group in phase 1/2

	2 µg cohort (n=111)			4 µg cohort (n=111)			8 µg cohort (n=111)			Total (n=333)		
	vaccination (n=83)	control (n=28)	P value	vaccination (n=84)	control (n=27)	P value	vaccination (n=83)	control (n=28)	P value	vaccination (n=250)	control (n=83)	P value
Injection site adverse reactions after the third dose												
Any	4(4.82%)	1(3.57%)	0.78	4(4.76%)	0(0.00%)	0.25	1(1.20%)	0(0.00%)	0.56	9(3.60%)	1(1.20%)	0.27
Grade 1	2(2.41%)	1(3.57%)		3(3.57%)	0(0.00%)		1(1.20%)	0(0.00%)		6(2.40%)	1(1.20%)	
Grade 2	2(2.41%)	0(0.00%)		1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		3(1.20%)	0(0.00%)	
Pain	1(1.20%)	1(3.57%)	0.42	1(1.19%)	0(0.00%)	0.57	0(0.00%)	0(0.00%)	1	2(0.80%)	1(1.20%)	0.74
Grade 1	1(1.20%)	1(3.57%)		1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		2(0.80%)	1(1.20%)	
Redness	1(1.20%)	0(0.00%)	0.56	3(3.57%)	0(0.00%)	0.32	1(1.20%)	0(0.00%)	0.56	5(2.00%)	0(0.00%)	0.19
Grade 1	0(0.00%)	0(0.00%)		2(2.38%)	0(0.00%)		1(1.20%)	0(0.00%)		3(1.20%)	0(0.00%)	
Grade 2	1(1.20%)	0(0.00%)		1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		2(0.80%)	0(0.00%)	
Swelling	1(1.20%)	0(0.00%)	0.56	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	1(0.40%)	0(0.00%)	0.56
Grade 2	1(1.20%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		1(0.40%)	0(0.00%)	
Itches	1(1.20%)	0(0.00%)	0.56	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	1(0.40%)	0(0.00%)	0.56
Grade 1	1(1.20%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		1(0.40%)	0(0.00%)	
Systemic adverse reactions after the third dose												
Any	0(0.00%)	0(0.00%)	1	1(1.19%)	0(0.00%)	0.57	1(1.20%)	0(0.00%)	0.56	2(0.80%)	0(0.00%)	0.41
Grade 1	0(0.00%)	0(0.00%)		1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		1(0.40%)	0(0.00%)	
Grade 2	0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		1(1.20%)	0(0.00%)		1(0.40%)	0(0.00%)	
Fever	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	1(1.20%)	0(0.00%)	0.56	1(0.40%)	0(0.00%)	0.56
Grade 2	0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		1(1.20%)	0(0.00%)		1(0.40%)	0(0.00%)	
Cough	0(0.00%)	0(0.00%)	1	1(1.19%)	0(0.00%)	0.57	0(0.00%)	0(0.00%)	1	1(0.40%)	0(0.00%)	0.56
Grade 1	0(0.00%)	0(0.00%)		1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		1(0.40%)	0(0.00%)	
Overall adverse reactions after the third dose												
Any	4(4.82%)	1(3.57%)	0.78	5(5.95%)	0(0.00%)	0.19	2(2.41%)	0(0.00%)	0.41	11(4.37%)	1(1.19%)	0.18
Grade 1	2(2.41%)	1(3.57%)		4(4.76%)	0(0.00%)		1(1.20%)	0(0.00%)		7(2.78%)	1(1.19%)	
Grade 2	2(2.41%)	0(0.00%)		1(1.19%)	0(0.00%)		1(1.20%)	0(0.00%)		4(1.59%)	0(0.00%)	

Data are n (%). Any refers to all the participants with any grade adverse reactions or reactions. Adverse reactions and reactions were graded according to the scale issued by the China State Food and Drug Administration. Grade 1=mild; Grade 2=moderate; Grade 3=severe.

Appendix 8. Adverse reactions within 7 days after each vaccination dose and overall adverse reactions within 30 days after the first vaccination dose for 13~17 year-old group in phase 1/2

	2 µg cohort (n=112)			4 µg cohort (n=112)			8 µg cohort (n=112)			Total (n=336)		
	vaccination (n=84)	control (n=28)	P value	vaccination (n=84)	control (n=28)	P value	vaccination (n=84)	control (n=28)	P value	Vaccination (n=252)	control (n=84)	P value
Injection site adverse reactions after the first dose												
Any	4(4.76%)	2(7.14%)	0.63	9(10.71%)	0(0.00%)	0.071	4(4.76%)	0(0.00%)	0.24	17(6.75%)	2(2.38%)	0.13
Grade 1	4(4.76%)	2(7.14%)		9(10.71%)	0(0.00%)		4(4.76%)	0(0.00%)		17(6.75%)	2(2.38%)	
Pain	4(4.76%)	0(0.00%)	0.24	8(9.52%)	0(0.00%)	0.090	3(3.57%)	0(0.00%)	0.31	15(5.95%)	0(0.00%)	0.022
Grade 1	4(4.76%)	0(0.00%)		8(9.52%)	0(0.00%)		3(3.57%)	0(0.00%)		15(5.95%)	0(0.00%)	
Redness	0(0.00%)	1(3.57%)	0.082	0(0.00%)	0(0.00%)	1	1(1.19%)	0(0.00%)	0.56	1(0.39%)	1(1.19%)	0.41
Grade 1	0(0.00%)	1(3.57%)		0(0.00%)	0(0.00%)		1(1.19%)	0(0.00%)		1(0.39%)	1(1.19%)	
Swelling	0(0.00%)	1(3.57%)	0.082	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	0(0.00%)	1(1.19%)	0.083
Grade 1	0(0.00%)	1(3.57%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	1(1.19%)	
Itches	0(0.00%)	0(0.00%)	1	1(1.19%)	0(0.00%)	0.56	0(0.00%)	0(0.00%)	1	1(0.39%)	0(0.00%)	0.56
Grade 1	0(0.00%)	0(0.00%)		1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		1(0.39%)	0(0.00%)	
Systemic adverse reactions after the first dose												
Any	18(21.43%)	0(0.00%)	0.0075	12(14.29%)	0(0.00%)	0.034	1(1.19%)	7(25.00%)	<0.0001	43(17.06%)	12(14.29%)	0.55
Grade 1	17(20.24%)	0(0.00%)		12(14.29%)	0(0.00%)		1(1.19%)	6(21.43%)		42(16.67%)	11(13.10%)	
Grade 2	1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	1(3.57%)		1(0.39%)	1(1.19%)	
Fever	6(7.14%)	0(0.00%)	0.15	6(7.14%)	0(0.00%)	0.15	1(1.19%)	5(17.86%)	0.0007	13(0.39%)	5(5.95%)	0.78
Grade 1	6(7.14%)	0(0.00%)		6(7.14%)	0(0.00%)		1(1.19%)	5(17.86%)		13(4.76%)	5(5.95%)	
Fatigue	3(3.57%)	0(0.00%)	0.31	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	2(0.79%)	0(0.00%)	0.41
Grade 1	2(2.38%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		1(0.39%)	0(0.00%)	
Grade 2	1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)	
Diarrhea	0(0.00%)	0(0.00%)	1	4(4.76%)	0(0.00%)	0.24	0(0.00%)	2(7.14%)	0.013	4(1.59%)	2(2.38%)	0.63
Grade 1	0(0.00%)	0(0.00%)		4(4.76%)	0(0.00%)		0(0.00%)	1(3.57%)		4(1.59%)	1(1.19%)	
Grade 2	0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	1(3.57%)		0(0.00%)	1(1.19%)	
Headache	1(1.19%)	0(0.00%)	0.56	1(1.19%)	0(0.00%)	0.56	0(0.00%)	1(3.57%)	0.082	3(1.90%)	0(0.00%)	0.31
Grade 1	1(1.19%)	0(0.00%)		1(1.19%)	0(0.00%)		0(0.00%)	1(3.57%)		3(1.90%)	0(0.00%)	
Cough	0(0.00%)	0(0.00%)	1	1(1.19%)	0(0.00%)	0.56	0(0.00%)	0(0.00%)	1	1(0.39%)	0(0.00%)	0.56
Grade 1	0(0.00%)	0(0.00%)		1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		1(0.39%)	0(0.00%)	
Nausea	2(2.38%)	0(0.00%)	0.41	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	2(0.79%)	0(0.00%)	0.41
Grade 1	2(2.38%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		2(0.79%)	0(0.00%)	
Muscle pain	3(3.57%)	0(0.00%)	0.31	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	3(1.90%)	0(0.00%)	0.31
Grade 1	3(3.57%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		3(1.90%)	0(0.00%)	
Vomiting	2(2.38%)	0(0.00%)	0.41	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	2(0.79%)	0(0.00%)	0.41
Grade 1	2(2.38%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		2(0.79%)	0(0.00%)	
Dysphagia	1(1.19%)	0(0.00%)	0.56	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	1(0.39%)	0(0.00%)	0.56
Grade 1	1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		1(0.39%)	0(0.00%)	
Overall adverse reactions after the first dose												
Any	24(28.57%)	2(7.14%)	0.020	21(0.25%)	0(0.00%)	0.0033	5(5.95%)	7(25.00%)	0.048	62(24.60%)	14(16.67%)	0.13
Grade 1	23(27.38%)	2(7.14%)		21(0.25%)	0(0.00%)		5(5.95%)	6(21.43%)		51(20.24%)	13(15.48%)	
Grade 2	1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	1(3.57%)		1(0.39%)	1(1.19%)	

Data are n (%). Any refers to all the participants with any grade adverse reactions or reactions. Adverse reactions and reactions were graded according to the scale issued by the China State Food and Drug Administration. Grade 1=mild; Grade 2=moderate; Grade 3=severe.

Appendix 9. Adverse reactions within 7 days after each vaccination dose and overall adverse reactions within 30 days after the second vaccination dose for 13~17 year-old group in phase 1/2

	2 µg cohort (n=112)			4 µg cohort (n=109)			8 µg cohort (n=112)			Total (n=333)		
	vaccination (n=84)	control (n=28)	P value	vaccination (n=83)	control (n=26)	P value	vaccination (n=84)	control (n=28)	P value	vaccination (n=251)	control (n=82)	P value
Injection site adverse reactions after the second dose												
Any	1(1.19%)	0(0.00%)	0.56	4(4.82%)	0(0.00%)	0.25	2(2.38%)	0(0.00%)	1	7(2.79%)	0(0.00%)	0.13
Grade 1	1(1.19%)	0(0.00%)		4(4.82%)	0(0.00%)		2(2.38%)	0(0.00%)		7(2.79%)	0(0.00%)	
Pain	0(0.00%)	0(0.00%)	1	4(4.82%)	0(0.00%)	0.25	0(0.00%)	0(0.00%)	1	4(1.59%)	0(0.00%)	0.25
Grade 1	0(0.00%)	0(0.00%)		4(4.82%)	0(0.00%)		0(0.00%)	0(0.00%)		4(1.59%)	0(0.00%)	
Redness	1(1.19%)	0(0.00%)	0.56	0(0.00%)	0(0.00%)	1	2(2.38%)	0(0.00%)	1	3(1.20%)	0(0.00%)	0.32
Grade 1	1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		2(2.38%)	0(0.00%)		3(1.20%)	0(0.00%)	
Systemic adverse reactions after the second dose												
Any	8(9.53%)	0(0.00%)	0.090	3(3.61%)	0(0.00%)	0.33	9(10.71%)	2(7.14%)	0.73	20(7.97%)	2(2.44%)	0.080
Grade 1	6(7.14%)	0(0.00%)		3(3.61%)	0(0.00%)		6(7.14%)	2(7.14%)		15(5.98%)	2(2.38%)	
Grade 2	2(2.38%)	0(0.00%)		0(0.00%)	0(0.00%)		3(3.57%)	0(0.00%)		5(1.99%)	0(0.00%)	
Fever	3(3.57%)	0(0.00%)	0.31	2(2.41%)	0(0.00%)	0.42	4(4.76%)	2(7.14%)	0.64	9(3.59%)	2(2.44%)	0.58
Grade 1	2(2.38%)	0(0.00%)		2(2.41%)	0(0.00%)		3(3.57%)	2(7.14%)		7(2.79%)	2(2.44%)	
Grade 2	1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		1(1.19%)	0(0.00%)		2(0.80%)	0(0.00%)	
Fatigue	1(1.19%)	0(0.00%)	0.56	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1
Grade 1	1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		1(0.40%)	0(0.00%)	
Nausea	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	2(2.38%)	0(0.00%)	1	2(0.80%)	0(0.00%)	0.42
Grade 1	0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		1(1.19%)	0(0.00%)		1(0.40%)	0(0.00%)	
Grade 2	0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		1(1.19%)	0(0.00%)		1(0.40%)	0(0.00%)	
Cough	1(1.19%)	0(0.00%)	0.56	1(1.20%)	0(0.00%)	0.57	1(1.19%)	0(0.00%)	1	3(1.20%)	0(0.00%)	0.31
Grade 1	0(0.00%)	0(0.00%)		1(1.20%)	0(0.00%)		0(0.00%)	0(0.00%)		1(0.40%)	0(0.00%)	
Grade 2	1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		1(1.19%)	0(0.00%)		2(0.80%)	0(0.00%)	
Vomiting	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	2(2.38%)	0(0.00%)	1	2(0.80%)	0(0.00%)	0.42
Grade 1	0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		2(2.38%)	0(0.00%)		2(0.80%)	0(0.00%)	
Dyspnea	1(1.19%)	0(0.00%)	0.56	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	1(0.40%)	0(0.00%)	0.57
Grade 1	1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		1(0.40%)	0(0.00%)	
Muscle pain	1(1.19%)	0(0.00%)	0.56	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	1(0.39%)	0(0.00%)	0.57
Grade 1	1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		1(0.39%)	0(0.00%)	
Headache	1(1.19%)	0(0.00%)	0.56	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	1(0.39%)	0(0.00%)	0.57
Grade 1	1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		1(0.39%)	0(0.00%)	
Overall adverse reactions after the second dose												
Any	9(10.71%)	0(0.00%)	0.11	7(8.43%)	0(0.00%)	0.13	11(13.10%)	2(7.14%)	0.51	27(10.76%)	2(2.44%)	0.020
Grade 1	7(8.33%)	0(0.00%)		7(8.43%)	0(0.00%)		8(9.53%)	2(7.14%)		22(8.76%)	2(2.44%)	
Grade 2	2(2.38%)	0(0.00%)		0(0.00%)	0(0.00%)		3(3.57%)	0(0.00%)		5(1.20%)	0(0.00%)	

Data are n (%). Any refers to all the participants with any grade adverse reactions or reactions. Adverse reactions and reactions were graded according to the scale issued by the China State Food and Drug Administration. Grade 1=mild; Grade 2=moderate; Grade 3=severe.

Appendix 10. Adverse reactions within 7 days after each vaccination dose and overall adverse reactions within 30 days after the third vaccination dose for 13~17 year-old group in phase 1/2

	2 µg cohort (n=112)			4 µg cohort (n=109)			8 µg cohort (n=112)			Total		
	vaccination (n=84)	control (n=28)	P value	vaccination (n=83)	control (n=26)	P value	vaccination (n=84)	control (n=28)	P value	vaccination (n=251)	control (n=82)	P value
Injection site adverse reactions after the third dose												
Any	5(5.95%)	2(7.14%)	0.83	0(0.00%)	0(0.00%)	1	0(0.00%)	1(3.57%)	0.082	6(2.39%)	2(2.44%)	0.98
Grade 1	4(4.76%)	2(7.14%)		0(0.00%)	0(0.00%)		0(0.00%)	1(3.57%)		5(1.99%)	2(2.44%)	
Grade 2	1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		1(0.40%)	0(0.00%)	
Pain	1(1.19%)	0(0.00%)	0.56	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	1(0.40%)	0(0.00%)	0.57
Grade 1	1(1.19%)	1(3.57%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		1(0.40%)	1(1.22%)	
Redness	3(3.57%)	1(3.57%)	1	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	4(1.59%)	0(0.00%)	0.25
Grade 1	2(2.38%)	1(3.57%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		3(1.20%)	1(1.22%)	
Grade 2	1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		1(0.40%)	0(0.00%)	
Itches	1(1.19%)	0(0.00%)	0.56	0(0.00%)	0(0.00%)	1	0(0.00%)	0(0.00%)	1	1(0.40%)	0(0.00%)	0.57
Grade 1	1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		1(0.40%)	0(0.00%)	
Systemic adverse reactions after the third dose												
Any	2(2.38%)	0(0.00%)	0.41	2(2.41%)	1(3.85%)	0.78	2(2.38%)	0(0.00%)	0.41	6(2.39%)	1(1.22%)	0.52
Grade 1	1(1.19%)	0(0.00%)		2(2.41%)	1(3.85%)		2(2.38%)	0(0.00%)		5(1.99%)	1(1.22%)	
Grade 2	1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		1(0.40%)	0(0.00%)	
Fever	2(2.38%)	0(0.00%)	0.41	1(1.20%)	1(3.85%)	0.38	1(1.19%)	0(0.00%)	0.56	4(1.59%)	0(0.00%)	0.25
Grade 1	1(1.19%)	0(0.00%)		1(1.20%)	1(3.85%)		1(1.19%)	0(0.00%)		3(1.20%)	1(1.22%)	
Grade 2	1(1.19%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		1(0.40%)	0(0.00%)	
Cough	0(0.00%)	0(0.00%)	1	1(1.20%)	0(0.00%)	0.57	1(1.19%)	0(0.00%)	0.56	2(0.80%)	0(0.00%)	0.42
Grade 1	0(0.00%)	0(0.00%)		1(1.20%)	0(0.00%)		1(1.19%)	0(0.00%)		2(0.80%)	0(0.00%)	
Overall adverse reactions after the third dose												
Any	7(8.33%)	2(7.14%)	0.84	2(2.41%)	1(3.85%)	0.70	2(2.38%)	1(3.57%)	0.74	11(4.38%)	4(4.88%)	0.85
Grade 1	5(5.95%)	2(7.14%)		2(2.41%)	1(3.85%)		2(2.38%)	1(3.57%)		9(3.59%)	4(4.88%)	
Grade 2	2(2.38%)	0(0.00%)		0(0.00%)	0(0.00%)		0(0.00%)	0(0.00%)		2(0.80%)	0(0.00%)	

Data are n (%). Any refers to all the participants with any grade adverse reactions or reactions. Adverse reactions and reactions were graded according to the scale issued by the China State Food and Drug Administration. Grade 1=mild; Grade 2=moderate; Grade 3=severe.

Appendix 11. Abnormal changes of laboratory tests within 4 days after each vaccination in phase 1 in 3~5 year-old cohort.

Abnormal in Laboratory measures		2 µg (n=32)		4 µg (n=32)		8 µg (n=32)		Total (n=96)	
		vaccination (n=24)	control (n=8)	vaccination (n=24)	control (n=8)	vaccination (n=24)	control (n=8)	vaccination (n=72)	control (n=24)
WBC*	Any	10(41.67%)	0(0.00%)	4(16.67%)	5(62.50%)	3(12.50%)	1(12.50%)	17(23.61%)	6(25.00%)
	Grade 1	6(25.00%)	0(0.00%)	4(16.67%)	4(50.00%)	3(12.50%)	1(12.50%)	13(18.06%)	5(20.83%)
	Grade 2	2(8.33%)	0(0.00%)	0(0.00%)	1(12.50%)	0(0.00%)	0(0.00%)	2(2.78%)	1(4.17%)
	Grade 3	2(8.33%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	2(2.78%)	0(0.00%)
LYM	Any	0(0.00%)	0(0.00%)	1(4.17%)	0(0.00%)	0(0.00%)	0(0.00%)	1(1.39%)	0(0.00%)
	Grade 1	0(0.00%)	0(0.00%)	1(4.17%)	0(0.00%)	0(0.00%)	0(0.00%)	1(1.39%)	0(0.00%)
	Grade 2	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
	Grade 3	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
ALT	Any	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	1(4.17%)	0(0.00%)	1(1.39%)	0(0.00%)
	Grade 1	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	1(4.17%)	0(0.00%)	1(1.39%)	0(0.00%)
	Grade 2	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
	Grade 3	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
AST	Any	1(4.17%)	0(0.00%)	0(0.00%)	0(0.00%)	2(8.33%)	0(0.00%)	3(4.17%)	0(0.00%)
	Grade 1	1(4.17%)	0(0.00%)	0(0.00%)	0(0.00%)	2(8.33%)	0(0.00%)	3(4.17%)	0(0.00%)
	Grade 2	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
	Grade 3	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
GLU	Any	1(4.17%)	0(0.00%)	2(8.33%)	0(0.00%)	0(0.00%)	0(0.00%)	3(4.17%)	0(0.00%)
	Grade 1	1(4.17%)	0(0.00%)	2(8.33%)	0(0.00%)	0(0.00%)	0(0.00%)	3(4.17%)	0(0.00%)
	Grade 2	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
	Grade 3	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)

Data are n (%). WBC, white blood cells; HGB, hemoglobin; ALT, alanine aminotransferase; BUN, blood urea nitrogen; AST, aspartate aminotransferase; GLU, blood glucose; TBIL, serum total bilirubin; PRO, urinary protein; U-GLU, urinary glucose. * Elevations in white blood cell count following vaccination were observed.

Appendix 12. Abnormal changes of laboratory tests within 4 days after each vaccination in phase 1 in 6~12 year-old cohort.

Abnormal in Laboratory measures		2 µg (n=32)		4 µg (n=32)		8 µg (n=32)		Total (n=96)	
		vaccination (n=24)	control (n=8)	vaccination (n=24)	control (n=8)	vaccination (n=24)	control (n=8)	vaccination (n=72)	control (n=24)
WBC*	Any	3(12.50%)	1(12.50%)	7(29.17%)	3(37.50%)	1(4.17%)	1(12.50%)	11(15.28%)	5(20.83%)
	Grade 1	3(12.50%)	1(12.50%)	6(25.00%)	2(25.00%)	0(0.00%)	1(12.50%)	9(12.50%)	4(16.67%)
	Grade 2	0(0.00%)	0(0.00%)	0(0.00%)	1(12.50%)	1(4.17%)	0(0.00%)	1(1.39%)	1(4.17%)
	Grade 3	0(0.00%)	0(0.00%)	1(4.17%)	0(0.00%)	0(0.00%)	0(0.00%)	1(1.39%)	0(0.00%)
ALT	Any	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	1(4.17%)	2(25.00%)	1(1.39%)	2(8.33%)
	Grade 1	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	1(4.17%)	2(25.00%)	1(1.39%)	2(8.33%)
	Grade 2	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
	Grade 3	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
AST	Any	1(4.17%)	0(0.00%)	0(0.00%)	0(0.00%)	1(4.17%)	2(25.00%)	2(2.78%)	2(8.33%)
	Grade 1	1(4.17%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	2(25.00%)	1(1.39%)	2(8.33%)
	Grade 2	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	1(4.17%)	0(0.00%)	1(1.39%)	0(0.00%)
	Grade 3	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
GLU	Any	2(8.33%)	0(0.00%)	1(4.17%)	1(12.50%)	0(0.00%)	0(0.00%)	3(4.17%)	1(4.17%)
	Grade 1	2(8.33%)	0(0.00%)	1(4.17%)	1(12.50%)	0(0.00%)	0(0.00%)	3(4.17%)	1(4.17%)
	Grade 2	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
	Grade 3	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
TBIL	Any	3(12.50%)	4(50.00%)	0(0.00%)	0(0.00%)	1(4.17%)	0(0.00%)	4(5.56%)	4(16.67%)
	Grade 1	2(8.33%)	3(37.50%)	0(0.00%)	0(0.00%)	1(4.17%)	0(0.00%)	3(4.17%)	3(12.50%)
	Grade 2	1(4.17%)	1(12.50%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	1(1.39%)	1(4.17%)
	Grade 3	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
PRO	Any	0(0.00%)	1(12.50%)	2(8.33%)	0(0.00%)	2(8.33%)	0(0.00%)	4(5.56%)	1(4.17%)
	Grade 1	0(0.00%)	1(12.50%)	1(4.17%)	0(0.00%)	1(4.17%)	0(0.00%)	2(2.78%)	1(4.17%)
	Grade 2	0(0.00%)	0(0.00%)	1(4.17%)	0(0.00%)	1(4.17%)	0(0.00%)	2(2.78%)	0(0.00%)
	Grade 3	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)

Data are n (%). WBC, white blood cells; HGB, hemoglobin; ALT, alanine aminotransferase; BUN, blood urea nitrogen; AST, aspartate aminotransferase; GLU, blood glucose; TBIL, serum total bilirubin; PRO, urinary protein; U-GLU, urinary glucose. * Elevations in white blood cell count following vaccination were observed.

Appendix 13. Abnormal changes of laboratory tests within 4 days after each vaccination in phase 1 in 13~17 year-old cohort.

Abnormal in Laboratory measures		2 µg (n=32)		4 µg (n=32)		8 µg (n=32)		Total (n=96)	
		vaccination (n=24)	control (n=8)	vaccination (n=24)	control (n=8)	vaccination (n=24)	control (n=8)	vaccination (n=72)	control (n=24)
WBC*	Any	1(4.17%)	0(0.00%)	1(4.17%)	1(12.50%)	0(0.00%)	1(12.50%)	2(2.78%)	2(8.33%)
	Grade 1	1(4.17%)	0(0.00%)	1(4.17%)	1(12.50%)	0(0.00%)	0(0.00%)	2(2.78%)	1(4.17%)
	Grade 2	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	1(12.50%)	0(0.00%)	1(4.17%)
	Grade 3	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
HGB	Any	3(12.50%)	0(0.00%)	0(0.00%)	1(12.50%)	4(16.67%)	0(0.00%)	7(9.72%)	1(4.17%)
	Grade 1	3(12.50%)	0(0.00%)	0(0.00%)	1(12.50%)	2(8.33%)	0(0.00%)	5(6.94%)	1(4.17%)
	Grade 2	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	2(8.33%)	0(0.00%)	2(2.78%)	0(0.00%)
	Grade 3	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
ALT	Any	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	2(8.33%)	0(0.00%)	2(2.78%)	0(0.00%)
	Grade 1	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	2(8.33%)	0(0.00%)	2(2.78%)	0(0.00%)
	Grade 2	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
	Grade 3	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
GLU	Any	0(0.00%)	0(0.00%)	3(12.50%)	0(0.00%)	0(0.00%)	0(0.00%)	3(4.17%)	0(0.00%)
	Grade 1	0(0.00%)	0(0.00%)	3(12.50%)	0(0.00%)	0(0.00%)	0(0.00%)	3(4.17%)	0(0.00%)
	Grade 2	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
	Grade 3	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
TBIL	Any	1(4.17%)	7(87.50%)	5(20.83%)	1(12.50%)	0(0.00%)	2(25.00%)	6(8.33%)	10(41.67%)
	Grade 1	1(4.17%)	7(87.50%)	4(16.67%)	1(12.50%)	0(0.00%)	1(12.50%)	5(6.94%)	9(37.50%)
	Grade 2	0(0.00%)	0(0.00%)	1(4.17%)	0(0.00%)	0(0.00%)	1(12.50%)	1(1.39%)	1(4.17%)
	Grade 3	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
PRO	Any	2(8.33%)	0(0.00%)	2(8.33%)	0(0.00%)	0(0.00%)	0(0.00%)	4(5.56%)	0(0.00%)
	Grade 1	1(4.17%)	0(0.00%)	2(8.33%)	0(0.00%)	0(0.00%)	0(0.00%)	3(4.17%)	0(0.00%)
	Grade 2	1(4.17%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	1(1.39%)	0(0.00%)
	Grade 3	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)

Data are n (%). WBC, white blood cells; HGB, hemoglobin; ALT, alanine aminotransferase; BUN, blood urea nitrogen; AST, aspartate aminotransferase; GLU, blood glucose; TBIL, serum total bilirubin; PRO, urinary protein; U-GLU, urinary glucose. * Elevations in white blood cell count following vaccination were observed.

Appendix 14: Statistical Analysis of neutralizing antibody GMT in phase1/2 3~5 year-old group on day 0

		2 µg group (n=111)		4 µg group (n=112)		8 µg group (n=112)	
		Vaccination (n=83)	control (n=28)	Vaccination (n=84)	control (n=28)	Vaccination (n=84)	control (n=28)
Day 0	Number of valid subjects	83	28	84	28	84	28
	Geometric Mean	2	2	2	2	2	2
	Lower 95%CI, Upper 95% CI	2,2	2,2	2,2	2,2	2,2	2,2
	Median	2	2	2	2	2	2
	Min, Max	2,2	2,2	2,2	2,2	2,2	2,2
	t-test p-value vs. control	--	--	--	--	--	--
	t-test p-value vs. 4 µg	--	--	--	--	--	--
	t-test p-value vs. 8 µg	--	--	--	--	--	--

Appendix 15: Statistical Analysis of neutralizing antibody GMT in phase1/2 3~5 year-old group on day 28

		2 µg group (n=111)		4 µg group (n=112)		8 µg group (n=112)	
		Vaccination (n=83)	control (n=28)	Vaccination (n=84)	control (n=28)	Vaccination (n=84)	control (n=28)
Day 28	Number of valid subjects	83	27	83	27	83	28
	Geometric Mean	14.4821	2	20.1867	2	21.3519	2
	Lower 95%CI, Upper 95% CI	11.2153, 18.7005	2,2	16.2849, 25.0234	2,2	17.5303, 26.0066	2,2
	Median	12	2	16	2	20	2
	Min, Max	4,128	2,2	4,192	2,2	4,128	2,2
	t-test p-value vs. control	<0.001	--	<0.001	--	<0.001	--
	t-test p-value vs. 4 µg	0.50	--	--	--	--	--
	t-test p-value vs. 8 µg	0.80	--	0.85	--	--	--

Appendix 16: Statistical Analysis of neutralizing antibody GMT in phase1/2 3~5 year-old group on day 56

		2 µg group (n=111)		4 µg group (n=112)		8 µg group (n=112)	
		Vaccination (n=83)	control (n=28)	Vaccination (n=84)	control (n=28)	Vaccination (n=84)	control (n=28)
Day 56	Number of valid subjects	82	27	83	26	83	28
	Geometric Mean	105.3023	2	180.2401	2	170.9560	2
	Lower 95%CI, Upper 95% CI	90.9201, 121.9595	2,2	163.6719, 198.4855	2,2	155.8099, 187.5743	2,2
	Median	96	2	192	2	192	2
	Min, Max	16,384	2,2	64,512	2,2	48,384	2,2
	t-test p-value vs. control	<0.001	--	<0.001	--	<0.001	--
	t-test p-value vs. 4 µg	<0.001	--	--	--	--	--
	t-test p-value vs. 8 µg	<0.001	--	0.71	--	--	--

Appendix 17: Statistical Analysis of neutralizing antibody GMT in phase1/2 3~5 year-old group on day 84

		2 µg group (n=111)		4 µg group (n=112)		8 µg group (n=112)	
		Vaccination (n=83)	control (n=28)	Vaccination (n=84)	control (n=28)	Vaccination (n=84)	control (n=28)
Day 84	Number of valid subjects	82	27	83	26	83	28
	Geometric Mean	143.5504	2	199.1137	2	224.3981	2
	Lower 95%CI, Upper 95% CI	124.3196, 165.7559	2,2	174.0670, 227.7644	2,2	202.1648, 249.0766	2,2
	Median	128	2	192	2	256	2
	Min, Max	48,768	2,2	48,768	2,2	64,768	2,2
	t-test p-value vs. control	<0.001	--	<0.001	--	<0.001	--
	t-test p-value vs. 4 µg	0.0018	--	--	--	--	--
	t-test p-value vs. 8 µg	<0.001	--	0.85	--	--	--

Appendix 18: Statistical Analysis of neutralizing antibody GMT in phase1/2 6~12 year-old group on day 0

		2 µg group (n=112)		4 µg group (n=112)		8 µg group (n=112)		
		vaccination (n=84)	control (n=28)	vaccination (n=84)	control (n=28)	control (n=28)	Vaccination (n=84)	
Day 0	Number of valid subjects	84	28	84	28	84	28	
	Geometric Mean	2	2	2	2	2	2	
	Lower 95%CI, Upper 95% CI	2,2	2,2	2,2	2,2	2,2	2,2	
	Median	2	2	2	2	2	2	
	Min, Max	2,2	2,2	2,2	2,2	2,2	2,2	
	t-test p-value vs. control	--	--	--	--	--	--	
	t-test p-value vs. 4 µg	--	--	--	--	--	--	
t-test p-value vs. 8 µg	--	--	--	--	--	--		

Appendix 19: Statistical Analysis of neutralizing antibody GMT in phase1/2 6~12 year-old group on day 28

		2 µg group (n=112)		4 µg group (n=112)		8 µg group (n=112)	
		vaccination (n=84)	control (n=28)	vaccination (n=84)	control (n=28)	control (n=28)	Vaccination (n=84)
Day 28	Number of valid subjects	84	28	84	28	83	28
	Geometric Mean	29.9702	2	54.0703	2	55.7936	2
	Lower 95%CI, Upper 95% CI	24.9888, 35.9447	2,2	45.6197, 64.0864	2,2	45.3101, 68.7027	2,2
	Median	32	2	48	2	64	2
	Min, Max	4,192	2,2	12,256	2,2	8,256	2,2
	t-test p-value vs. control	<0.001	--	<0.001	--	<0.001	--
	t-test p-value vs. 4 µg	<0.001	--	--	--	--	--
	t-test p-value vs. 8 µg	<0.001	--	0.58	--	--	--

Appendix 20: Statistical Analysis of neutralizing antibody GMT in phase1/2 6~12 year-old group on day 56

		2 µg group (n=112)		4 µg group (n=112)		8 µg group (n=112)	
		vaccination (n=84)	control (n=28)	vaccination (n=84)	control (n=28)	control (n=28)	Vaccination (n=84)
Day 56	Number of valid subjects	83	28	84	27	83	28
	Geometric Mean	84.0707	2	168.6164	2	162.8219	2
	Lower 95%CI, Upper 95% CI	72.6433, 97.2957	2,2	151.9886, 187.0633	2,2	145.6480, 182.0207	2,2
	Median	96	2	192	2	128	2
	Min, Max	16,256	2,2	48,512	2,2	32,512	2,2
	t-test p-value vs. control	<0.001	--	<0.001	--	<0.001	--
	t-test p-value vs. 4 µg	<0.001	--	--	--	--	--
	t-test p-value vs. 8 µg	<0.001	--	0.80	--	--	--

Appendix 21: Statistical Analysis of neutralizing antibody GMT in phase1/2 6~12 year-old group on day 84

		2 µg group (n=112)		4 µg group (n=112)		8 µg group (n=112)	
		vaccination (n=84)	control (n=28)	vaccination (n=84)	control (n=28)	control (n=28)	Vaccination (n=84)
Day 84	Number of valid subjects	83	28	84	27	83	28
	Geometric Mean	126.9976	2	184.7821	2	175.7806	2
	Lower 95%CI, Upper 95% CI	111.8506, 144.1960	2,2	162.4801, 210.1452	2,2	175.7806, 195.3714	2,2
	Median	128	2	192	2	192	2
	Min, Max	16,512	2,2	48,768	2,2	64,768	2,2
	t-test p-value vs. control	<0.001	--	<0.001	--	<0.001	--
	t-test p-value vs. 4 µg	<0.001	--	--	--	--	--
	t-test p-value vs. 8 µg	<0.001	--	0.58	--	--	--

Appendix 22: Statistical Analysis of neutralizing antibody GMT in phase1/2 13~17 year-old group on day 0

		2 µg group (n=112)		4 µg group (n=112)		8 µg group (n=112)	
		vaccination (n=84)	control (n=28)	vaccination (n=84)	control (n=28)	control (n=28)	Vaccination (n=84)
Day 0	Number of valid subjects	84	28	84	28	84	28
	Geometric Mean	2	2	2	2	2	2
	Lower 95%CI, Upper 95% CI	2,2	2,2	2,2	2,2	2,2	2,2
	Median	2	2	2	2	2	2
	Min, Max	2,2	2,2	2,2	2,2	2,2	2,2
	t-test p-value vs. control	--	--	--	--	--	--
	t-test p-value vs. 4 µg	--	--	--	--	--	--
t-test p-value vs. 8 µg	--	--	--	--	--	--	

Appendix 23: Statistical Analysis of neutralizing antibody GMT in phase1/2 13~17 year-old group on day 28

		2 µg group (n=112)		4 µg group (n=112)		8 µg group (n=112)	
		vaccination (n=84)	control (n=28)	vaccination (n=84)	control (n=28)	control (n=28)	Vaccination (n=84)
Day 28	Number of valid subjects	84	28	83	26	84	28
	Geometric Mean	48.0065	2	61.4127	2	80.2357	2
	Lower 95%CI, Upper 95% CI	42.4591, 54.2786	2,2	52.1449, 72.3276	2,2	69.3001, 92.8968	2,2
	Median	48	2	64	2	96	2
	Min, Max	12,192	2,2	4,512	2,2	8,256	2,2
	t-test p-value vs. control	<0.001	--	<0.001	--	<0.001	--
	t-test p-value vs. 4 µg	0.0053	--	--	--	--	--
	t-test p-value vs. 8 µg	<0.001	--	0.25	--	--	--

Appendix 24: Statistical Analysis of neutralizing antibody GMT in phase1/2 13~17 year-old group on day 56

		2 µg group (n=112)		4 µg group (n=112)		8 µg group (n=112)	
		vaccination (n=84)	control (n=28)	vaccination (n=84)	control (n=28)	control (n=28)	Vaccination (n=84)
Day 56	Number of valid subjects	84	28	83	26	84	28
	Geometric Mean	88.0373	2	155.7459	2	147.9686	2
	Lower 95%CI, Upper 95% CI	77.8571, 99.5485	2,2	137.4294, 176.5036	2,2	131.9985, 165.8709	2,2
	Median	96	2	192	2	192	2
	Min, Max	24,384	2,2	48,512	2,2	32,384	2,2
	t-test p-value vs. control	<0.001	--	<0.001	--	<0.001	--
	t-test p-value vs. 4 µg	<0.001	--	--	--	--	--
	t-test p-value vs. 8 µg	<0.001	--	0.53	--	--	--

Appendix 25: Statistical Analysis of neutralizing antibody GMT in phase1/2 13~17 year-old group on day 84

		2 µg group (n=112)		4 µg group (n=112)		8 µg group (n=112)	
		vaccination (n=84)	control (n=28)	vaccination (n=84)	control (n=28)	control (n=28)	Vaccination (n=84)
Day 84	Number of valid subjects	84	28	83	26	84	28
	Geometric Mean	150.7355	2	198.9887	2	192.1453	2
	Lower 95%CI, Upper 95% CI	134.1534, 169.3671	2,2	180.6011, 219.2485	2,2	175.3180, 210.5878	2,2
	Median	128	2	192	2	192	2
	Min, Max	32,512	2,2	96,512	2,2	64,512	2,2
	t-test p-value vs. control	<0.001	--	<0.001	--	<0.001	--
	t-test p-value vs. 4 µg	0.0053	--	--	--	--	--
	t-test p-value vs. 8 µg	0.011	--	0.53	--	--	--

