

Supplementary Table 1: Population Demographics

	Cohort 1 0.01 mcg (n=4)	Cohort 2 0.1 mcg (n=4)	Cohort 3 0.5 mcg (n=4)	Cohort 4 2.5 mcg (n=4)	Cohort 5 10 mcg (n=4)	Cohort 6 20 mcg (n=4)	Cohort 7 20 mcg x2 (n=4)	All Cohorts N=28
Age, Year								
Mean	28.4	30.8	28.0	29.3	33.0	34.6	33.1	31.7
(min, max)	(23, 32)	(28, 32)	(23, 30)	(24, 33)	(25, 38)	(33, 36)	(25, 35)	(23, 38)
Gender, n (%)								
Female	3 (75.0)	2 (50.0)	3 (75.0)	2 (50.0)	1 (25.0)	3 (75.0)	3 (75.0)	17 (60.7)
Male	1 (25.0)	2 (50.0)	1 (25.0)	2 (50.0)	3 (75.0)	1 (25.0)	1 (25.0)	11 (39.3)
Ethnicity, n (%)								
Hispanic or Latino	1 (25.0)	1 (25.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (7.1)
Non-Hispanic/Latino	3 (75.0)	3 (75.0)	4 (100.0)	4 (100.0)	4 (100.0)	4 (100.0)	4 (100.0)	26 (92.9)
Race, n (%)								
Black/African-American	1 (25.0)	2 (50.0)	0 (0.0)	1 (25.0)	2 (50.0)	4 (100.0)	2 (50.0)	12 (42.9)
White	3 (75.0)	2 (50.0)	3 (75.0)	2 (50.0)	1 (25.0)	0 (0.0)	1 (25.0)	12 (42.9)
Asian	0 (0.0)	0 (0.0)	1 (25.0)	1 (25.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (7.1)
Multi-racial	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (25.0)	0 (0.0)	1 (25.0)	2 (7.1)

Supplemental Table 2: Serum anti-SEB IgG ELISA antibody, Geometric Mean Titers (95% Confidence Intervals)

	Cohort 1 0.01 mcg N=4	Cohort 2 0.1 mcg N=4	Cohort 3 0.5 mcg N=4	Cohort 4 2.5 mcg N=4	Cohort 5 10 mcg N=4	Cohort 6 20 mcg N=4
Baseline	8.05 x10 ³ (99.0, 6.55 x10 ⁵)	4.00 x10 ³ (441, 3.63 x10 ⁴)	2.99 x10 ³ (69.6, 1.29 x10 ⁵)	3.26 x10 ⁴ (1.72 x10 ⁴ , 6.19 x10 ⁴)	9.88 x10 ³ (70.7, 1.38 x10 ⁶)	1.33 x10 ⁴ (3.64 x10 ³ , 4.89 x10 ⁴)
Day 7	9.13 x10 ³ (98.3, 8.48 x10 ⁵)	4.58 x10 ³ (551, 3.82 x10 ⁴)	5.20 x10 ³ (114, 2.38 x10 ⁵)	6.92 x10 ⁴ (1.51 x10 ⁴ , 3.18 x10 ⁵)	2.87 x10 ⁴ (170, 4.87 x10 ⁶)	6.18 x10 ⁴ (2.19 x10 ⁴ , 1.75 x10 ⁵)
Day 14	1.21 x10 ⁴ (102, 1.43 x10 ⁶)	1.48 x10 ⁴ (2250, 9.74 x10 ⁴)	3.71 x10 ⁴ (1730, 7.93 x10 ⁵)	5.18 x10 ⁵ (1.05 x10 ⁵ , 2.56 x10 ⁶)	1.31 x10 ⁵ (1040, 1.64 x10 ⁷)	5.13 x10 ⁵ (1.05 x10 ⁵ , 2.51 x10 ⁶)
Day 21	1.32 x10 ⁴ (123, 1.42 x10 ⁶)	1.99 x10 ⁴ (3030, 1.31 x10 ⁵)	4.36 x10 ⁴ (3540, 5.37 x10 ⁵)	6.65 x10 ⁵ (1.20 x10 ⁵ , 3.69 x10 ⁶)	2.13 x10 ⁵ (3680, 1.23 x10 ⁷)	6.82 x10 ⁵ (1.43 x10 ⁵ , 3.26 x10 ⁶)
Day 28	1.31 x10 ⁴ (104, 1.64 x10 ⁶)	2.27 x10 ⁴ (3350, 1.54 x10 ⁵)	3.98 x10 ⁴ (2840, 5.58 x10 ⁵)	8.53 x10 ⁵ (2.01 x10 ⁵ , 3.61 x10 ⁶)	2.55 x10 ⁵ (4390, 1.48 x10 ⁷)	6.89 x10 ⁵ (1.25 x10 ⁵ , 3.80 x10 ⁶)
Day 56	1.18 x10 ⁴ (101, 1.36 x10 ⁶)	2.42 x10 ⁴ (3600, 1.62 x10 ⁵)	3.45 x10 ⁴ (2730, 4.36 x10 ⁵)	9.53 x10 ⁵ (2.22 x10 ⁵ , 4.09 x10 ⁶)	2.86 x10 ⁵ (4370, 1.87 x10 ⁷)	7.69 x10 ⁵ (3.24 x10 ⁵ , 1.83 x10 ⁶)

	Cohort 7 20 mcg x2 N=4
Baseline	3.29 x10 ³ (510, 2.12 x10 ⁴)
Day 7	1.18 x10 ⁴ (225, 6.13 x10 ⁵)
Day 14	1.61 x10 ⁵ (1880, 1.38 x10 ⁷)
Day 21 (dose #2)	1.82 x10 ⁵ (2130, 1.55 x10 ⁷)
Day 28	1.99 x10 ⁵ (3560, 1.11 x10 ⁷)
Day 35	1.83 x10 ⁵ (4870, 6.84 x10 ⁶)
Day 42	1.98 x10 ⁵ (6290, 6.27 x10 ⁶)
Day 49	1.91 x10 ⁵ (6080, 5.99 x10 ⁶)
Day 77	1.57 x10 ⁵ (6940, 3.57 x10 ⁶)

Supplemental Table 3: Serum staphylococcal enterotoxin B toxin neutralizing antibody, GMT (95% CI)

	Cohort 1 0.01 mcg N=4	Cohort 2 0.1 mcg N=4	Cohort 3 0.5 mcg N=4	Cohort 4 2.5 mcg N=4	Cohort 5 10 mcg N=3	Cohort 6 20 mcg N=4
Baseline	1500 (22.3, 1.01 x10 ⁵)	1010 (133, 7620)	1140 (18.7, 6.96 x10 ⁴)	2660 (2040, 3470)	2380 (0.21, 2.70 x10 ⁷)	2540 (493, 1.31 x10 ⁴)
Day 7	1620 (18.9, 1.38 x10 ⁵)	1150 (95.7, 1.38 x10 ⁴)	1390 (20.7, 9.35 x10 ⁴)	9410 (1120, 7.92 x10 ⁴)	2600 (0.19, 3.66 x10 ⁷)	1.25 x10 ⁴ (4910, 3.16 x10 ⁴)
Day 14	2360 (21.8, 2.56 x10 ⁵)	3340 (421, 2.65 x10 ⁴)	5340 (422, 6.76 x10 ⁴)	8.30 x10 ⁴ (2.16 x10 ⁴ , 3.19 x10 ⁵)	8120 (0.05, 1.24 x10 ⁹)	1.32 x10 ⁵ (1.94 x10 ⁴ , 8.93 x10 ⁵)
Day 21	2330 (22.8, 2.37 x10 ⁵)	4170 (517, 3.37 x10 ⁴)	5110 (363, 7.17 x10 ⁴)	1.06 x10 ⁵ (1.15 x10 ⁴ , 9.77 x10 ⁵)	8910 (0.05, 1.67 x10 ⁹)	2.03 x10 ⁵ (3.35 x10 ⁴ , 1.23 x10 ⁶)
Day 28	2450 (22.2, 2.70 x10 ⁵)	4400 (389, 4.98 x10 ⁴)	4940 (540, 4.52 x10 ⁴)	1.68 x10 ⁵ (3.20 x10 ⁴ , 8.85 x10 ⁵)	7510 (0.06, 9.71 x10 ⁸)	1.33 x10 ⁵ (4.36 x10 ⁴ , 4.07 x10 ⁵)
Day 56	2790 (22.7, 3.44 x10 ⁵)	5220 (53.7, 5.07 x10 ⁴)	4830 (512, 4.56 x10 ⁴)	1.21 x10 ⁵ (2.11 x10 ⁴ , 6.96 x10 ⁵)	6440 (0.07, 6.11 x10 ⁸)	1.44 x10 ⁵ (3.76 x10 ⁴ , 5.52 x10 ⁵)

	Cohort 7 20 mcg x 2 N=4
Baseline	768 (34.9, 1.69 x10 ⁴)
Day 7	3160 (9.74, 1.02 x10 ⁶)
Day 14	3.26 x10 ⁴ (166, 6.42 x10 ⁶)
Day 21 (dose #2)	5.47 x10 ⁴ (1030, 2.91 x10 ⁶)
Day 28	1.08 x10 ⁵ (6310, 1.85 x10 ⁶)
Day 35	1.30 x10 ⁵ (9650, 1.76 x10 ⁶)
Day 42	1.17 x10 ⁵ (1.15 x10 ⁴ , 1.20 x10 ⁶)
Day 49	1.05 x10 ⁵ (7500, 1.47 x10 ⁶)
Day 77	8.79 x10 ⁴ (5600, 1.38 x10 ⁶)