

Additional file 2: Origin and bactericidal activity of sera of susceptible piglets, sera pre-infection and sera post-infection

Group of sera	Serum	Challenge strain	Sides of detection (challenge strain)					Bacterial survival factor ^a (- not investigated)						
			Serosa	Spleen/ Liver	Brain/ CSF ^b	Joint fluid	Endocard	Bactericidal Assay				Opsonophagocytosis Assay		
								<i>cps14</i>	<i>cps2</i>	<i>cps7</i>	<i>cps9</i>	<i>cps2</i>	<i>cps7</i>	<i>cps9</i>
Sera of susceptible piglets	4546	<i>cps14</i> (V3117/2)	x	x		x		60.3	35.5	-	0.9	-	-	-
	5732	<i>cps14</i> (V3117/2)		x	x	x	x	2.8	1.9	-	0.9	-	-	-
	5831	<i>cps14</i> (V3117/2)				x		26.5	6.1	-	1.2	-	-	-
	9970	<i>cps2</i> (10)	x	x	x		x	-	-	-	-	-	-	-
	9747	<i>cps2</i> (10)	x	x		x	x	-	-	-	-	-	-	-
	9777	<i>cps2</i> (10)		x	x	x	x	-	-	-	-	-	-	-
	9884	<i>cps2</i> (10)		x	x	x		-	-	-	-	-	-	-
	9807	<i>cps2</i> (10)		x	x			-	-	-	-	-	-	-
	2886	<i>cps2</i> (10)		x	x	x		-	6.6	-	-	-	-	-
	2843	<i>cps2</i> (10)		x	x		x	-	8.5	-	-	2.0	14.4	0.9
	2858	<i>cps2</i> (10)	x	x				-	8.6	-	-	2.4	12.9	1.7
	3	<i>cps7</i> (13-00283-02)		x	x	x		-	0.1	44.8	0.2	-	-	-
	6	<i>cps7</i> (13-00283-02)				x		-	0.4	54.9	0.3	-	-	-
	12	<i>cps7</i> (13-00283-02)	x	x		x		-	0.4	62.3	1.1	-	-	-
	36	<i>cps7</i> (13-00283-02)				x		-	0.0	67.1	0.4	0.1	10.7	0.5
	15	<i>cps9</i> (16085/3b)		x	x	x	x	-	3.1	-	3.2	-	-	-
	28	<i>cps9</i> (16085/3b)	x	x	x	x	x	-	4.0	-	1.5	0.0	12.8	0.5
	30	<i>cps9</i> (16085/3b)	x	x	x			-	6.7	-	1.6	-	-	-
	39	<i>cps9</i> (16085/3b)			x				0.3	-	0	0.1	10.8	0.3
	8882	<i>cps9</i> (A3286/94)			x			-	3.6	-	2.4	-	-	-

Sera group	Serum	Challenge strain	Sides of detection (challenge strain)					Bacterial survival factor ^a						
			Serosa	Spleen/ Liver	Brain/ CSF ^b	Joint fluid	Endocard	Bactericidal Assay				Opsonophagocytosis		
								<i>cps14</i>	<i>cps2</i>	<i>cps7</i>	<i>cps9</i>	<i>cps2</i>	<i>cps7</i>	<i>cps9</i>
<i>Sera pre-infection</i>	5649	<i>cps14</i> (V3117/2)						0.00	1.4	-	0.2	-	-	-
	5663	<i>cps14</i> (V3117/2)						0.00	0.0	-	1.3	-	-	-
	1	<i>cps2</i> (10)						-	3.7	-	-	-	-	-
	33	<i>cps2</i> (10)						-	0.9	-	-	-	-	-
	107	<i>cps2</i> (10)						-	-	-	-	-	-	-
	150	<i>cps2</i> (10)						-	-	-	-	-	-	-
	9898	<i>cps2</i> (10)						-	-	-	-	-	-	-
	9506	<i>cps2</i> (10)						-	-	-	-	-	-	-
	9725	<i>cps2</i> (10)						-	-	-	-	-	-	-
	2786	<i>cps2</i> (10)						-	0.0	0.0	-	-	-	-
	3651	<i>cps2</i> (10)						-	8.2	-	-	2.1	11.6	1.1
	3561	<i>cps2</i> (10)						-	0.0	-	-	0.2	10.9	1.4
	9	<i>cps7</i> (13-00283-02)						-	0.7	25.4	0.5	-	-	-
	17	<i>cps7</i> (13-00283-02)						-	0.0	40.1	0.6	-	-	-
	24	<i>cps7</i> (13-00283-02)						-	0.8	47.5	0.9	-	-	-
	43	<i>cps7</i> (13-00283-02)						-	0	11.9	0.5	0.3	16.0	0.3
	4403	<i>cps7</i> (#451)						-	2.1	11.7	0.1	-	-	-
	132	<i>cps9</i> (A3286/94)						-	-	-	-	-	-	-
	370	<i>cps9</i> (8882/3; A3286/94-						-	0.6	0.0	0.3	-	-	-
	20	<i>cps9</i> (16085/3b)						-	2.4	-	0.0	1.3	12.0	0.3

Sera group	Serum	Challenge strain	Sides of detection (challenge strain)					Sides of detection (challenge strain)						
			Serosa	Spleen/ Liver	Brain/ CSF ^b	Joint fluid	Endocard	Bactericidal Assay				Opsonophagocytosis		
								<i>cps14</i>	<i>cps2</i>	<i>cps7</i>	<i>cps9</i>	<i>cps2</i>	<i>cps7</i>	<i>cps9</i>
<i>Sera post-infection</i>	5649	<i>cps14</i> (V3117/2)						-	-	-	-	0.6	0.1	1.0
	5663	<i>cps14</i> (V3117/2)						-	-	-	-	0.1	0.0	1.3
	1	<i>cps2</i> (10)						-	-	-	-	0.0	0.5	0.9
	33	<i>cps2</i> (10)						-	-	-	-	0.2	4.7	2.8
	107	<i>cps2</i> (10)						-	-	-	-	2.2	11	3.2
	150	<i>cps2</i> (10)						-	-	-	-	0.2	6.0	4.2
	9898	<i>cps2</i> (10)						-	-	-	-	0.0	0.0	0.5
	9506	<i>cps2</i> (10)						-	-	-	-	0.2	0.0	0.0
	9725	<i>cps2</i> (10)						-	-	-	-	0.1	0.0	0.4
	2786	<i>cps2</i> (10)						-	-	-	-	0.0	0.0	0.3
	3651	<i>cps2</i> (10)						-	-	-	-	0.0	7.0	0.2
	3561	<i>cps2</i> (10)						-	-	-	-	0.0	0.0	0.0
	9	<i>cps7</i> (13-00283-02)						-	0.8	-	0.3	0.3	0.0	0.6
	17	<i>cps7</i> (13-00283-02)						-	1.0	-	4.2	0.8	0.0	1.5
	24	<i>cps7</i> (13-00283-02)						-	0.1	-	0.0	0.8	0.0	0.4
	43	<i>cps7</i> (13-00283-02)						-	-	-	-	2.8	1.8	0.2
	4403	<i>cps7</i> (13-00283-02)						-	0.1	-	-	0.7	0.0	2.2
	132	<i>cps9</i> (A3286/94)						-	-	-	-	3.8	5.7	5.2
	370	<i>cps9</i> (8882/3; A3286/94-						-	-	-	-	0.5	0.2	0.0
	20	<i>cps9</i> (16085/3b)						-	2.5	-	0.0	1.9	0.0	0.0

^a Bactericidal assays were conducted with heparinized blood drawn from the same animal as the serum sample. The survival factors of bactericidal and opsonophagocytosis assays represented the ratio of CFU at 120 min and 60 min, respectively, to CFU at time zero. A minus (-) indicates that the assay was not conducted.

^b CSF = Cerebrospinal fluid