

Table S1

Strains and Plasmids		
Strain Designation	Description	Reference or Source
1457	<i>S. epidermidis</i> clinical isolate	P. Fey, (1)
7291	<i>S. epidermidis</i> clinical isolate	P. Fey
RP62A	<i>S. epidermidis</i> clinical isolate	ATCC 35984
1457-FL	1457 (pHL007); fluorescent reporter strain	This study
1457 $\Delta phnD$	1457 <i>phnD::dhfr</i> ; <i>phnD</i> deletion strain	This study
RN4220	<i>S. aureus</i> ; restriction-deficient cloning intermediate	P. Fey, (2)
Lowenstein	<i>S. aureus</i> clinical isolate; capsular type 5	ATCC 49521
MRSA252	<i>S. aureus</i> clinical isolate; methicillin resistant	ATCC BAA-1720
SM131	<i>S. haemolyticus</i> clinical isolate	ATCC 29970
R22	<i>S. hominis</i> clinical isolate	ATCC 700236
<i>E. coli</i> TOP10	cloning strain	Invitrogen
<i>E. coli</i> BL21(DE3)	protein expression strain; lambda lysogen encoding T7 RNA polymerase under control of the lacUV5 promoter	Invitrogen
Plasmid	Description	Reference or Source
pUC19	general cloning vector; AmpR	New England Biolabs
pE194	staphylococcal plasmid conferring ErmR	P. Fey, (3)
pROJ6448	pE194 with pC221 nick site for mobilization, temperature-sensitive replicon; ErmR	P. Fey, (4)
pHL007	<i>PftsA</i> -RFP (codon-optimized red fluorescent protein behind the <i>ftsA</i> promoter) ligated into multiple cloning site of pUC19, then combined with pE194 via <i>Pst</i> I	This study
pHL008	pROJ6448-derivative; allele exchange vector with <i>phnD::dhfr</i>	This study

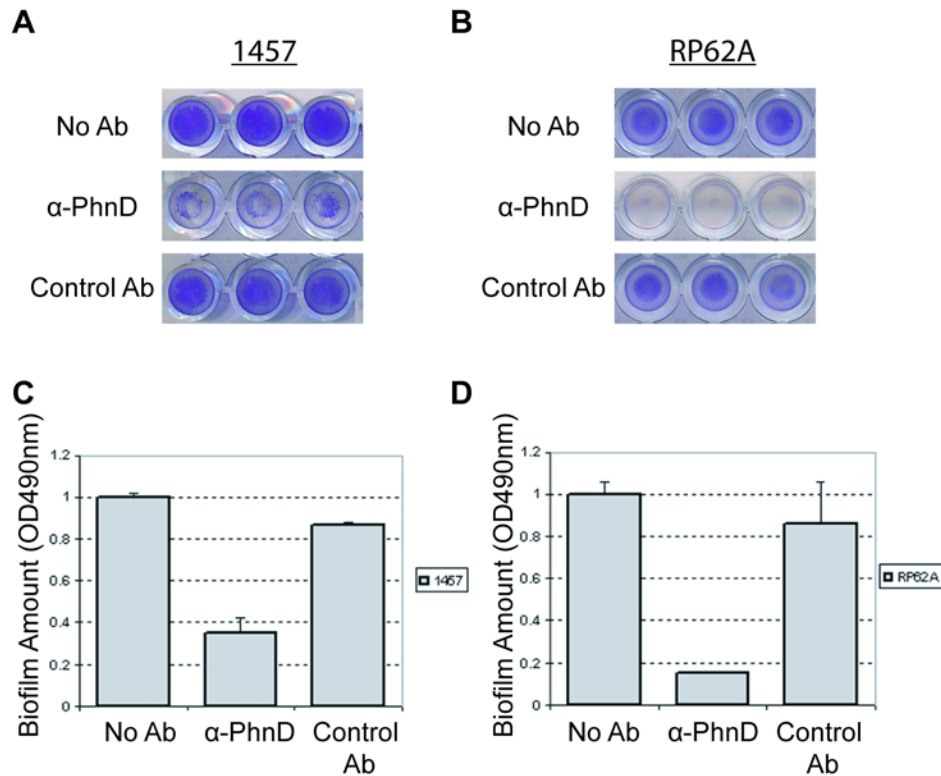


Fig. S1

FIGURE LEGENDS FOR SUPPLEMENTAL MATERIAL

Figure S1. PhnD antibodies inhibit *S. epidermidis* biofilm formation in the standard microtiter plate assay. Biofilms of *S. epidermidis* strains 1457 and RP62A were seeded at an OD_{600nm} of 0.05 and grown in TSB at 37°C. Cultures were incubated in triplicate with or without antibodies at 100 μ g/mL. After 8 h of static growth, biofilms were washed and stained with crystal violet. (A, B) Pictures of stained wells for each treatment. (C, D) Quantification of staining in panels A and B by absorbance spectroscopy, normalized to the ‘no antibody’ control as 1.0.

Movie 1. PhnD antibodies inhibit *S. epidermidis* 1457 biofilm formation. Time lapse video microscopy of biofilms grown at 37⁰C in the presence of control (rabbit anti-rat IgG, left) or PhnD (right) antibodies at 200 µg/mL. Images were acquired at 20 min intervals for 10 h. Scale bar: 30 µm.

Movie 2. PhnD antibodies inhibit *S. epidermidis* 1457-FL biofilm formation when administered in prophylactic mode. Time lapse video microscopy of biofilms grown at 30⁰C in the presence of control (rabbit anti-rat IgG, left) or PhnD (right) antibodies at 100 µg/mL. Images were acquired at 20 min intervals for 18 h. Scale bar: 30 µm.

Movie 3. PhnD antibodies inhibit *S. epidermidis* 1457-FL biofilm formation when administered in early therapeutic mode. Time lapse video microscopy of biofilms grown at 30⁰C in the presence control (rabbit anti-rat IgG, left) or PhnD (right) antibodies at 100 µg/mL. Images were acquired at 20 min intervals for 17 h. Scale bar: 30 µm.

Movie 4. Deletion of *phnD* results in defective biofilm formation. Time lapse video microscopy of *S. epidermidis* 1457 (left) and 1457 Δ *phnD* (right) strains grown at 30⁰C. Images were acquired at 20 min intervals for 18 h. Scale bar: 30 µm.

Movie 5. PhnD antibodies enhance the opsonophagocytosis of *S. epidermidis* biofilms. Neutrophils exhibit increased binding and active engulfment of biofilms in the presence of 5 µg/mL PhnD (right) versus control antibody (rabbit anti-rat IgG, left). Images were acquired at 2 min intervals for 4.25 h. Scale bar: 15 µm.

Movie 6. Single neutrophil tracking of biofilm opsonophagocytosis. A single neutrophil is capable of moving toward and engulfing large numbers of biofilm bacteria. Images were acquired at 2 min intervals for 108 min. Scale bar: 5 μ m.

Movie 7. PhnD antibodies inhibit *S. epidermidis* 1457-FL biofilms grown in human plasma. Longitudinal development of biofilms grown at 37⁰C in the presence of rabbit anti-rat IgG control (left) or PhnD antibodies (right) at 200 μ g/mL. Antibodies were administered in prophylactic mode at 200 μ g/mL. Images were acquired at 20 min intervals for 12 h. Scale bar: 30 μ m

REFERENCES FOR SUPPLEMENTAL MATERIAL

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