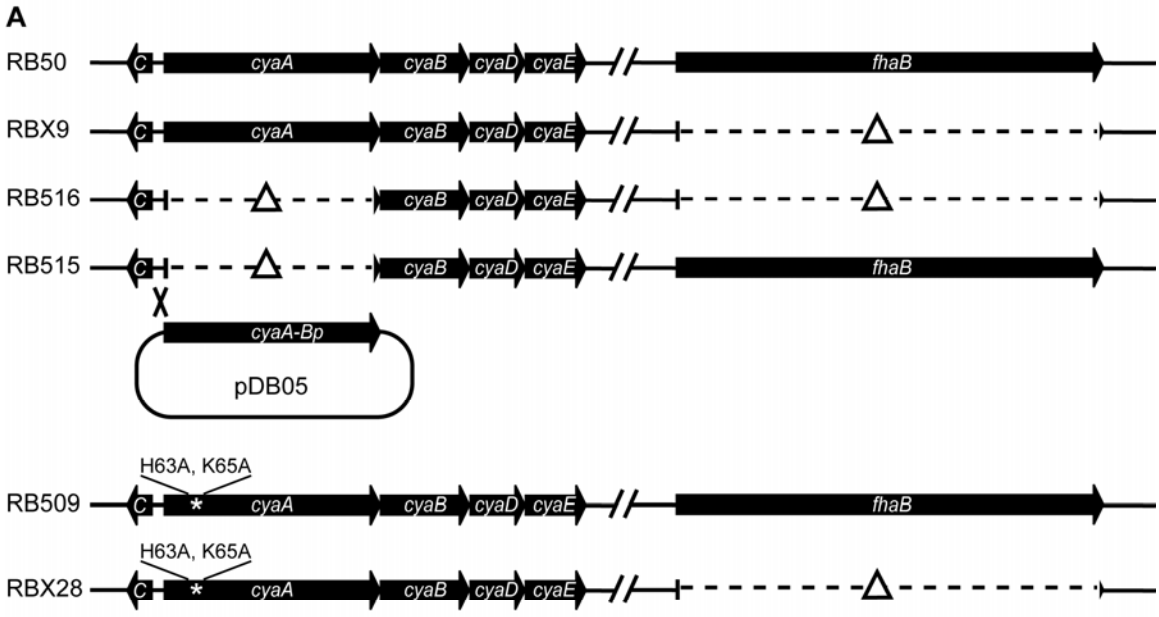
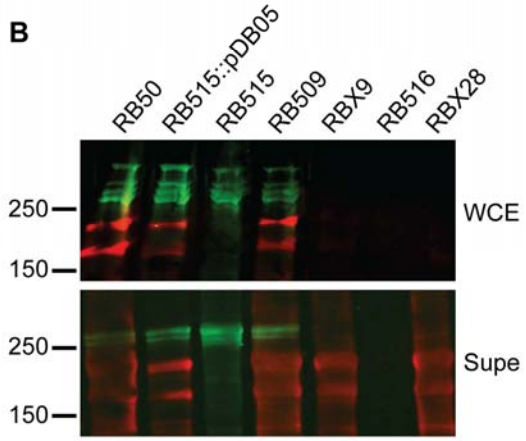
Supplemental Figure 1. Protein production by mutant strains

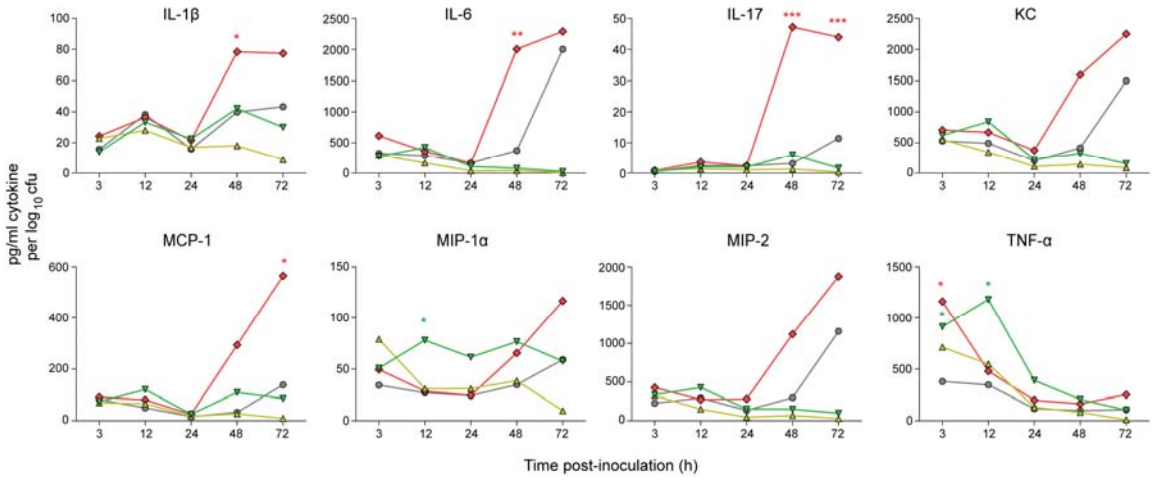
A. Schematic depicting the *cyaA* and *fhaB* genetic loci for strains used in this study. **B.** Bacterial cultures were normalized based on optical density, whole cell lysates and culture supernatants were collected for SDS-PAGE protein separation and Western blot. Production of FHA (green) and ACT (red) were detected using a Licor Odyssey imager.





Supplemental Figure 2. Cytokine production in lung homogenates normalized to the number of cfu

Lung homogenates assayed via Luminex technology for cytokine production (Fig. 3C) were further analyzed and normalized to a value per cfu of bacteria isolated at the given time point. Statistics are calculated as significant variation from wild type (*=$P < 0.05$, **=$P < 0.001$, ***=$P < 0.0001$).



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Supplemental Table 1. Strains and plasmids used in this study

Name	Description	Reference/Source
Bordetella strains		
RB50	Wild-type *B. bronchiseptica*	(1)
RB515::pDB05	RB50 expressing $CyaA_{Bp}$ instead of $CyaA_{Bb}$	This study
RB515	RB50Δ*cyaA* strain, contains only the first 4 and last 5 codons of *cyaA*	This study
RB509	RB50 expressing catalytically inactive CyaA	This study
RBX9	RB50Δ*fhaB* strain, contains only the first 4 and last 5 codons of *fhaB*	(2)
RB516	RB50Δ*fhaB*Δ*cyaA* strain	This study
RBX28	RB50Δ*fhaB* strain expressing catalytically inactive CyaA	This study
RBX11Δ28	RB50Δ*fhaS* strain containing a 28 a.a deletion within the mature C-terminal domain of *fhaB*	(3)
BPSM	Str^r derivative of clinical *B. pertussis* isolate Tohama I	(4)
E. coli strains		
DH5α	Molecular cloning strain	BRL; Gaithersburg, MD
RH03	Conjugation strain (diaminopimelic acid auxotroph)	(5)
Plasmids		
pEG7	*Bordetella* suicide plasmid ($Gent^r$ Amp^r)	(6)
pDB05	pEG7 containing *cyaA* from *B. pertussis* strain BPSM	This study
pEG7S	Allelic exchange plasmid ($Gent^r$ Amp^r $Sucrose^s$)	(7)
pCI56	pEG7S containing a large in-frame deletion of $cyaA_{Bb}$, used to generate strains RB515 and RB516	This study
pCI54	pEG7S encoding catalytically inactive CyaA ($cyaA_{Bb}$ has mutated codons H63A and K65A), used to generate strains RB509 and RBX28	This study
pΔ*fhaB*	pEG7S containing a large in-frame deletion of $fhaB_{Bb,}$ used to generate strains RBX9 and RB516	(7)

1. Cotter PA, Miller JF (1994) BvgAS-mediated signal transduction: analysis of phase-locked regulatory mutants of *Bordetella bronchiseptica* in a rabbit model. Infect Immun 62: 3381-3390.

2. Cotter PA, Yuk MH, Mattoo S, Akerley BJ, Boschwitz J, et al. (1998) Filamentous hemagglutinin of *Bordetella bronchiseptica* is required for efficient establishment of tracheal colonization. Infect Immun 66: 5921-5929.

3. Julio SM, Inatsuka CS, Mazar J, Dieterich C, Relman DA, Cotter PA. (2009) Natural-host animal models indicate functional interchangeability between the filamentous hemagglutinins of *Bordetella pertussis* and *Bordetella bronchispetica* and reveal a role for the mature C-terminal domain, but not the RGD motif, during infection. Mol. Microbiol 71: 1574-1590.

4. Menozzi, F. D., P. E. Boucher, G. Riveau, C. Gantiez, and C. Locht. 1994. Surface-associated filamentous hemagglutinin induces autoagglutination of *Bordetella pertussis*. Infect. Immun. 62:4261-4269.

5. Lopez, C. M., Rholl, D. A., Trunck, L. A., Schweizer, H. P. 2009. Versatile dual-technology system for markerless allele replacement in *Burkholderia pseudomallei*. Appl Environ Microbiol. 20:6496-503

6. Martinez de Tejada, G., J. F. Miller, and P. A. Cotter. 1996. Comparative analysis of the virulence control systems of *Bordetella pertussis* and *Bordetella bronchiseptica*. Mol. Microbiol. 22:895-908.

7. Cotter PA, Yuk MH, Mattoo S, Akerley BJ, Boschwitz J, et al. (1998) Filamentous hemagglutinin of *Bordetella bronchiseptica* is required for efficient establishment of tracheal colonization. Infect Immun 66: 5921-5929.