Table S1. Variables for the PCA. A total of 43 variables per animal were incorporated into to the post prime, day 57 PCA. There were 45 different variables per animal incorporated into post boost analyses for the day 196 PCA. There were 12 different variables included in the day 609 PCA.

Assay	Type of Readout	Antigen Specificity/Recall	Number of readouts per time point per animal	Included in PCA Day 57	Day 196	Day 609
Pertussis specific Ab titers	Total IgG	FHA, Fim2/3, PRN, PT, DT, and TT	6	X	X	X
SBA	SBA titer	N/A	1	X	X	X
Pertussis Toxin Neutralization	Neutralizing Titer	N/A	1	X	X	X
Pertussis Specific Memory B cells	Ab secreting cells/10(6) PBMC	Antigen pool (FHA, Fim2/3, PRN, and PT) and total IgG	2		X	X
Pertussis Specific Long-Lived Plasma Cells	Ab secreting cells/10(6) BM	Antigen pool (FHA, Fim2/3, PRN, and PT) and HKBp	2			X
T cell ELISPOT	Cytokine (IFN-γ, IL-13, IL-17) secreting cells/10(6) PBMC	HKBp, FHA, Fim2/3, PRN, and PT	15	X	X	
T cell cytokine secretion	Cytokine (IFN-γ, IL-5, IL-13, IL-17) concentration (pg/mL)	HKBp, FHA, Fim2/3, PRN, and PT	20	X	X	