



Supplementary Figure: Measurement of surface exposed phosphocholine in *S. pneumoniae* TIGR4 and $\Delta cadA$. TIGR4 and $\Delta cadA$ strains were grown to exponential phase and surface exposed phosphocholine (PC) was measured by FACS method. PC was stained with an unconjugated Kappa murine myeloma IgA anti-phosphocholine antibody, followed by detection with a phycoerythrin-conjugated rat anti-mouse secondary antibody. Samples were fixed in 2% paraformaldehyde and read on an Attune Acoustic Focusing Cytometer. A representative histogram plot of the fluorescence intensity of murine myeloma IgA antibody binding to exposed phosphocholine on TIGR4 and $\Delta cadA$ is shown. The gate was set based on a negative control that was treated with secondary antibody only.