



Figure S4. The antimicrobial peptide LL-37 affects PhoP-regulated transcription in the absence of MgrB. Transcriptional reporters for the $phoPphoQ$ operon were grown in the presence or absence of LL37. Cells were grown in minimal A medium with 1 mM MgSO_4 , 0.2% glucose, and 0.1% casamino acids overnight at 37°C. Overnight cultures were then diluted 1:1000 into tubes with pre-warmed medium containing 100 μM MgSO_4 . Cells were grown for 3.5 hours before cultures were split into two tubes and one received LL37 peptide (which was a gift from P. Janmey, University of Pennsylvania School of Medicine) to a final concentration of 2.5 $\mu\text{g}/\text{mL}$ and the other received diluent alone. Cultures were allowed to grow one additional hour and then were treated as described in Materials and Methods for fluorescence microscopy and single-cell measurements. Error bars represent the range of means for two independent experiments. Strains are from left to right TIM148, TIM229, and AML22.