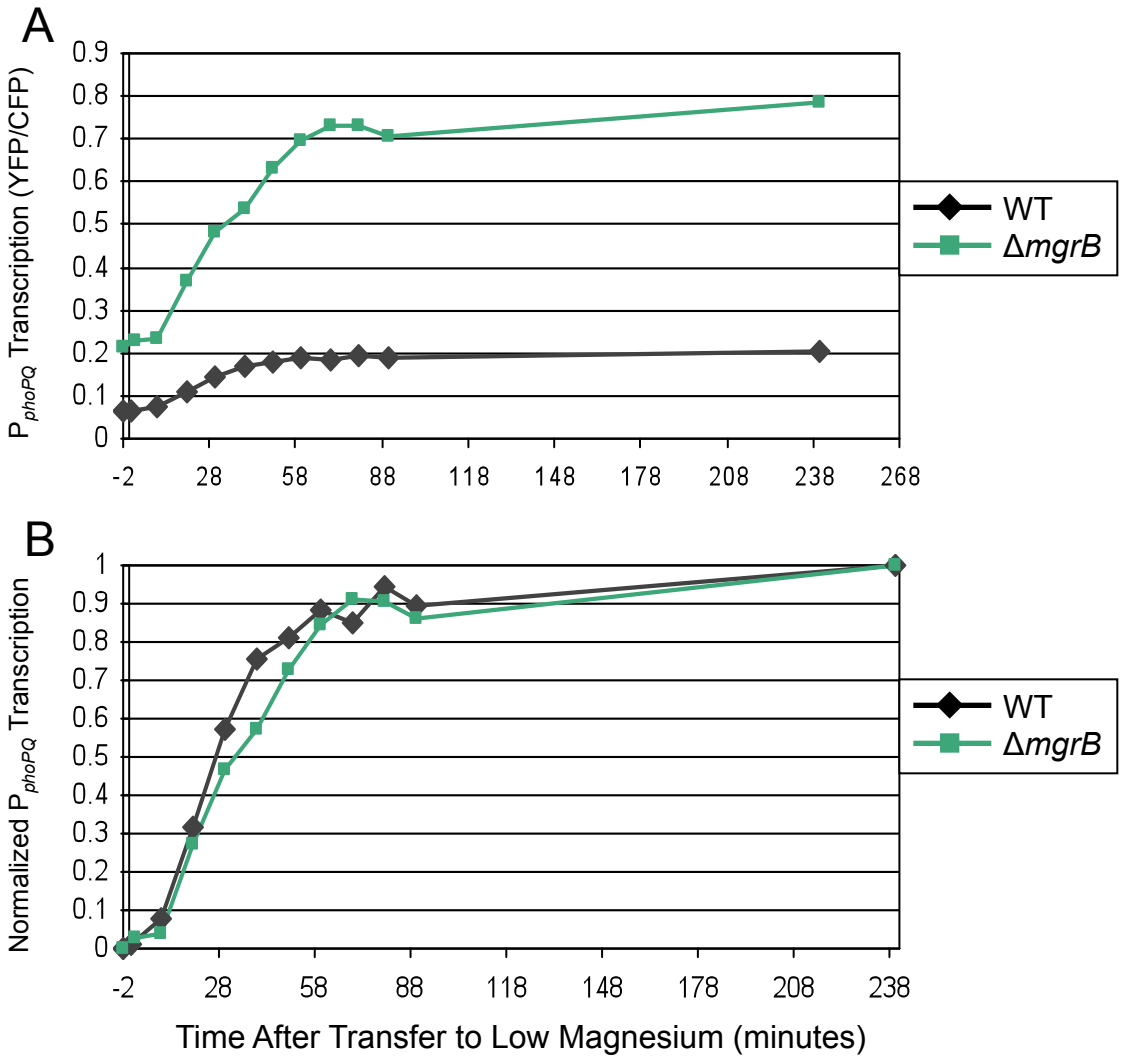

Figure S6. Kinetics of reporter induction for *mgrB*$^+$ and *mgrB*$^-$ strains. Transcriptional reporters for the *phoPphoQ* operon were grown in repressing conditions (10 mM $MgSO_4$) and then shifted to inducing (100 µM $MgSO_4$) medium and allowed to grow. Reporter transcription in wild-type and *mgrB*$^-$ cells is shown as raw data (A) and as curves normalized by shifting and rescaling as indicated below (B). Cells were grown in minimal A medium with 10 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 10 mM $MgSO_4$. 2 mL cultures were then grown for 4 hours before being spun down and resuspended in 2 mL medium with 100 µM $MgSO_4$. Cultures were allowed to grow for 4 hours, with aliquots removed and treated with streptomycin and immediately placed in an ice water slurry at 2 minutes prior to induction and at the indicated times after induction. Cells remained on ice for 1 hour and then analyzed by fluorescence microscopy as described in Materials and Methods. For figure B, fluorescence was normalized as follows:
$fl_{normalized}(t)=[fl(t)-fl(t_{initial})]/[fl(t_{final})-fl(t_{initial})]$,
where fl(t) denotes the fluorescence at time t minutes (labeled as P_{phoPQ} transcription in the figure) and $t_{initial}$ and t_{final} denote the first and last time points. Results from a single representative experiment are shown. Strains are TIM148 (diamonds) and AML53 (squares).