

Figure S1. Effect of L-lactate and electron acceptors on *dld* transcription. The *S. Tm* wild-type strain was grown in mucin broth. Nitrate (NO_3^-) and L-lactate were added as indicated at a concentration of 40 mM and 20 mM, respectively. Cultures were grown for 3 hours anaerobically (no electron acceptor and nitrate conditions) or in the presence of 1 % oxygen. RNA was extracted and *dld* mRNA levels determined by RT-qPCR. To determine differences between groups, a two-tailed, unpaired Student's *t*-test was applied to the ln-transformed data. Transcription was normalized to 16S rRNA. *, $P < 0.05$.

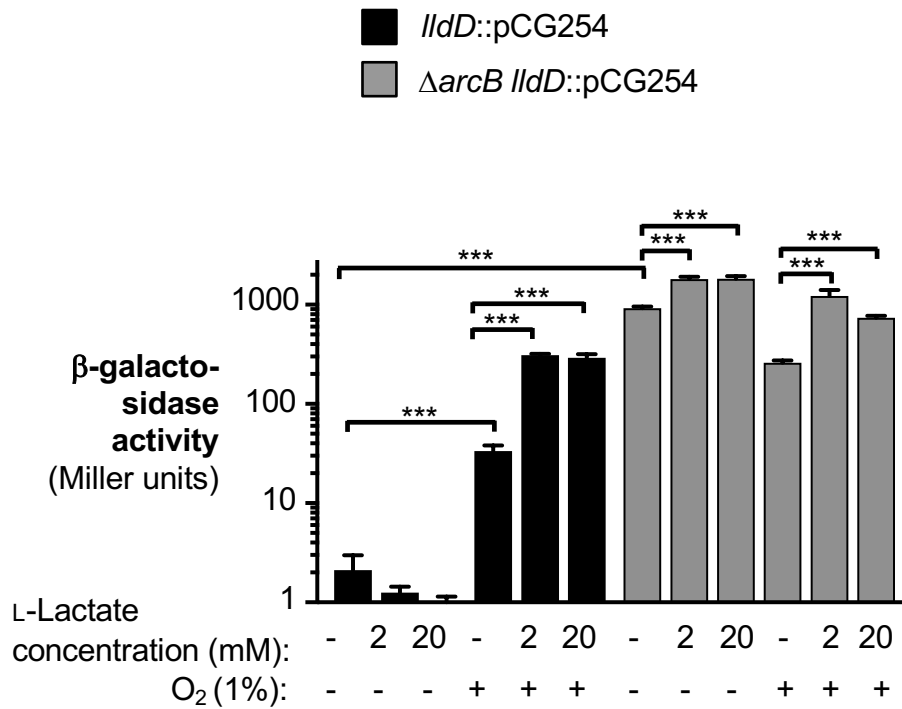


Figure S2. Effect of mutations in *arcB* on *IldD* transcription under anaerobic and microaerobic conditions. The *S. Tm* strains CG254 (*IldD::pCG254*) and CG268 ($\Delta arcB$ *IldD::pCG254*) were grown anaerobically (no oxygen conditions) or with 1 % oxygen. LB broth was supplemented with L-lactate as indicated. After 5 h, β -galactosidase activity was determined. All experiments were conducted with at least 3 biological replicates. To determine differences between groups, a two-tailed, unpaired Student's *t*-test was applied to the ln-transformed data. Bars indicate the geometric mean \pm standard error. *, $P < 0.05$, **, $P < 0.01$, ***, $P < 0.001$.

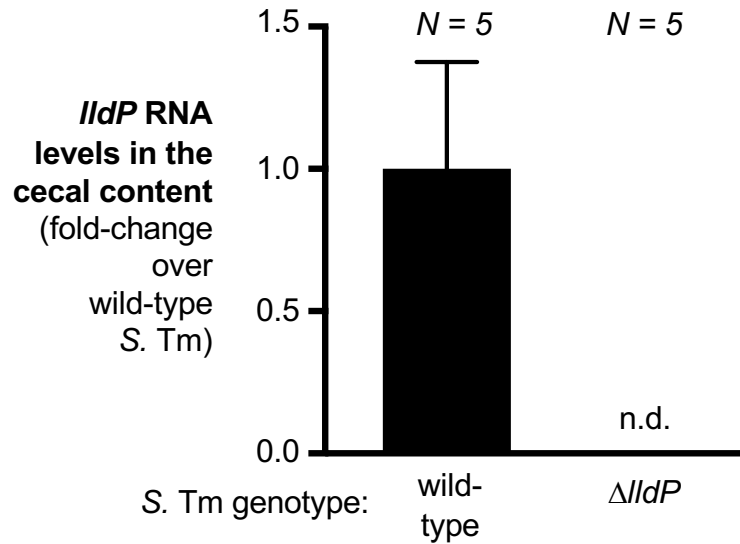


Figure S3. Specificity of *IldP* qPCR primers *in vivo*. Wild-type C57BL/6 mice were treated with streptomycin by oral gavage. One day later, animals were intragastrically infected with the *S. Tm* wild-type strain (IR715) and a $\Delta IldP$ mutant (CG226). Cecal content was collected for RNA extraction 5 days after infection. *S. Tm* RNA levels were assessed for *IldP*. Transcription was normalized to the *S. Tm* 16S rDNA gene. The number of mice per group (*N*) is indicated for each bar. Bars are the geometric mean \pm standard error. nd, not detected.

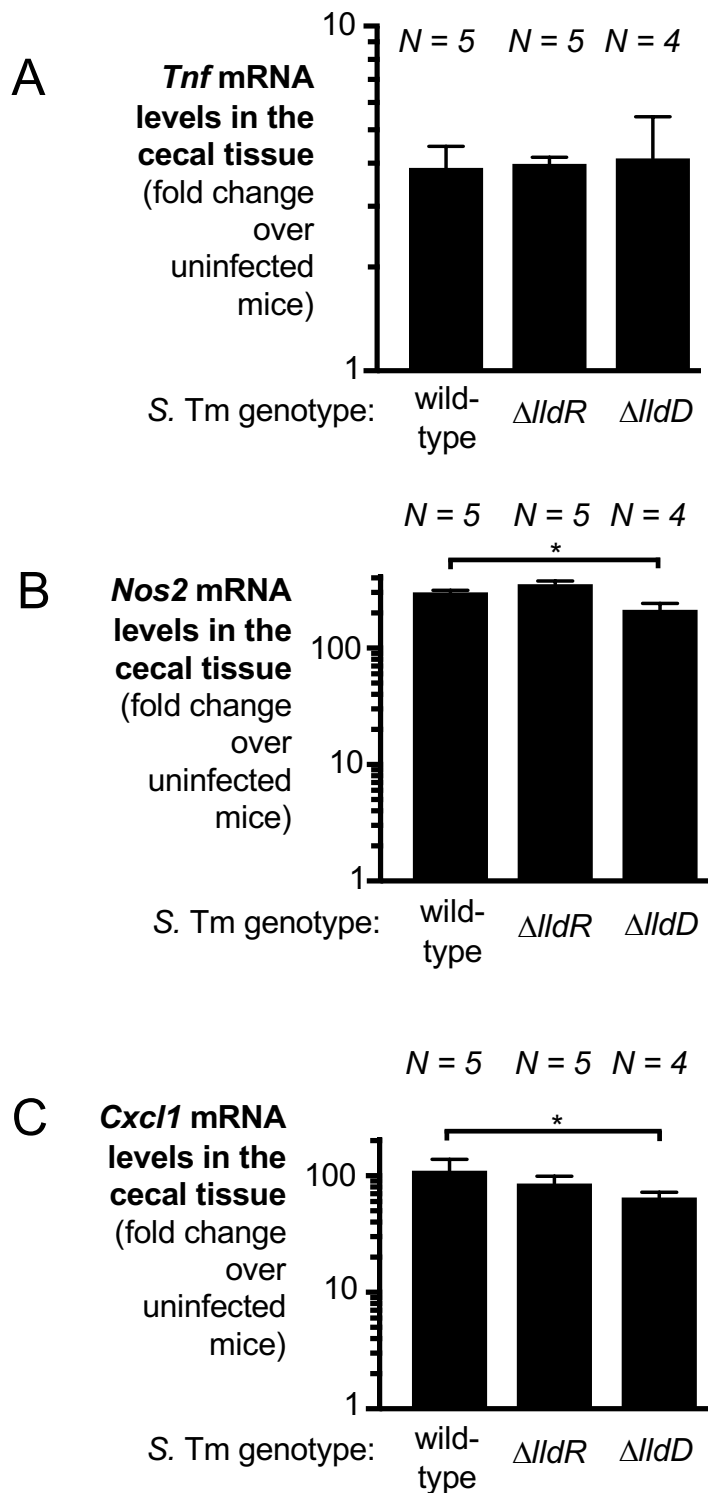


Figure S4. mRNA levels of inflammatory cytokines during *S. Tm* infection. Groups of C57BL/6 mice were treated with intragastric streptomycin. One day later, animals were infected with the *S. Tm* wild-type strain (IR715), a $\Delta lldD$ mutant (CG6), or a $\Delta lldR$ mutant (CG200). 5 days after infection, cecal tissue was flash frozen and RNA was extracted. RNA levels were assessed for *Tnf* (A), *Nos2* (B), and *Cxcl1* (C). Transcription was normalized to the murine *Gapdh* housekeeping gene. To determine differences between groups, a two-tailed, unpaired Student's *t*-test was applied to the ln-transformed data. The number of mice per group (*N*) is indicated for each bar. Bars are the geometric mean \pm standard error. *, $P < 0.05$.