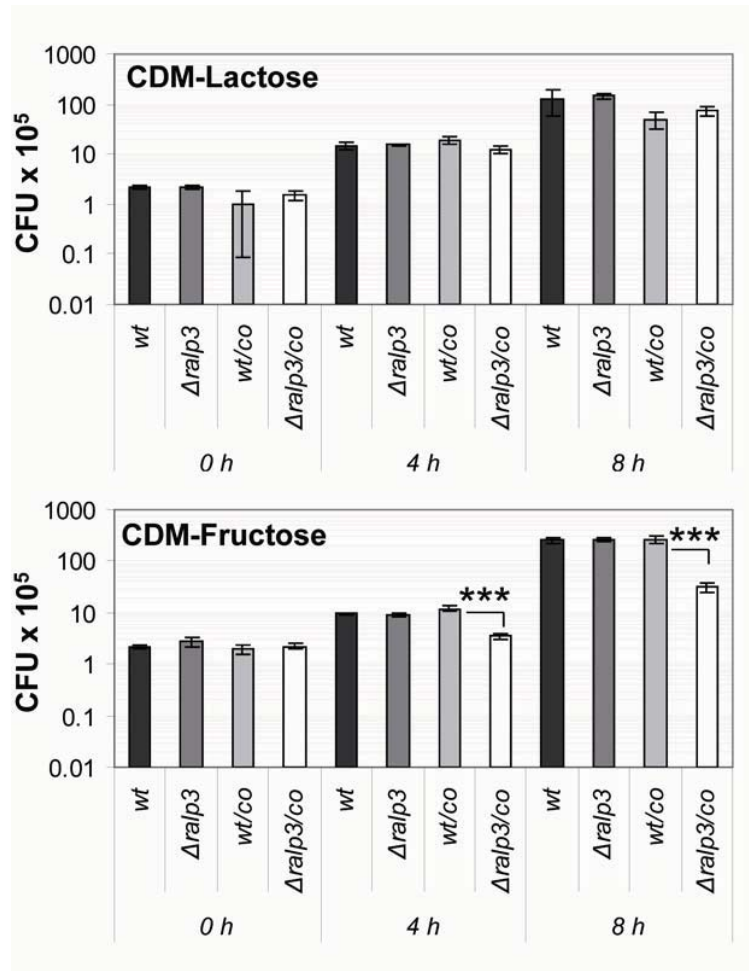


**Figure S1.** Growth of wild type and  $\Delta ralp3$  mutant strains in CDM supplemented with different carbon sources in varied amounts.






**Figure S2.** Determination of the CFU during the growth on CDM-Lactose and CDM-Fructose. wt: wild type control;  $\Delta$ ralp3:  $\Delta$ ralp3 deletion mutant control; wt/co and  $\Delta$ ralp3/co: both strains in a direct competition. (n = 3; \*\*\*  $p < 0.001$ ).

Gene	Fold change $\Delta ralp3$ (22)	Fold change $\Delta ralp3$ (this study)
<i>speB</i>	↑	↓
<i>emm</i>	↑	↓
<i>mga</i>	↑	↓
<i>ska</i>	●	●
<i>eno</i>	↓	●
<i>epf</i>	↑	●
<i>sagA</i>	●	●
<i>cpa</i>	●	●

Phenotype	(22)	This study
Hyaluronic acid	↑	↓
Blood survival	↑	↓
SpeB activity	↑	↓
Adherence/Internalization	↑	↓

 down regulated/decreased  
 up regulated/increased  
 unaffected

**Figure S3.** Comparison of the gene regulation and phenotype between GAS M1T1 (19) and GAS M49 from this study.