

O16 Serotype O Antigen Expression in *Escherichia coli* K-12 May Confer Resistance Against T4 Bacteriophage Infection By Preventing Adsorption

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SUPPLEMENTAL MATERIAL

Table S1. *E. coli* strains used in this study

<i>E. coli</i> strain	MG1655	DFB1655 L9
Relevant Genotype	K-12 strain. F- λ - rfb-50 rph-1 (CGSC7740)	MG1655 strain with pJP5603/ <i>wbbL</i> integrated into the <i>rfb</i> gene locus. O16 antigen producing strain.
Reference	(9)	(9)

Table S2. T4 Bacteriophage primers designed to amplify a section of the T4 capsid protein gene *gp23* in the qPCR analysis of the adsorbance assay.

qPCR Primers	Forward	Reverse
Sequence	5'- GTA TGG TAC GTC GTG CTA TTC -3'	5'- TTG GGT GGA ATG CTT CTT TAG -3'
Tm	52.9 °C	52.9 °C
GC Content	47.6 %	42.9 %
Expected Product Size (bp)	150	

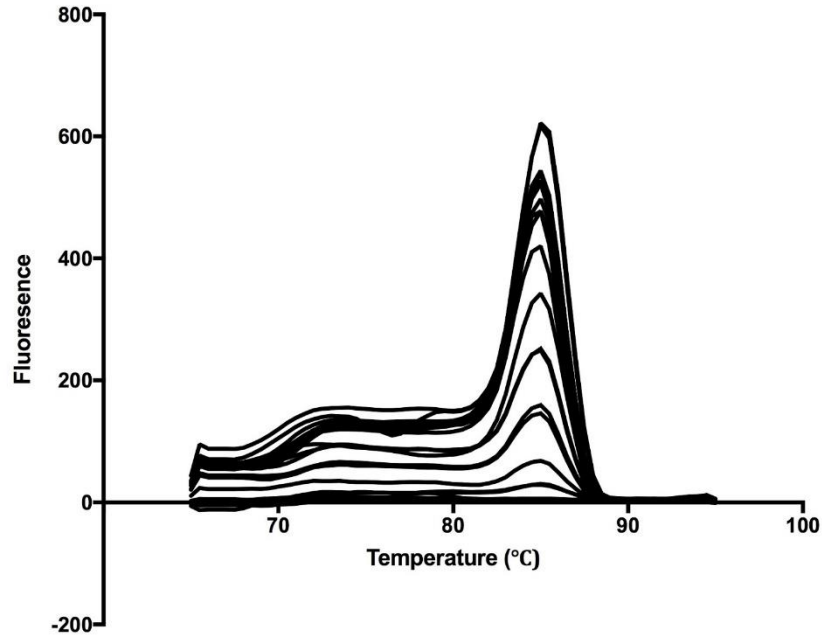


Figure S1. Melt curve of pure T4 bacteriophage and of *E. coli* K-12 supernatants from substrains MG1655 and DFB1655 L9 incubated with T4 bacteriophage following an adsorption assay and qPCR quantification. Reported $T_m = 85^\circ\text{C}$ for all qPCR samples, indicating sample purity.

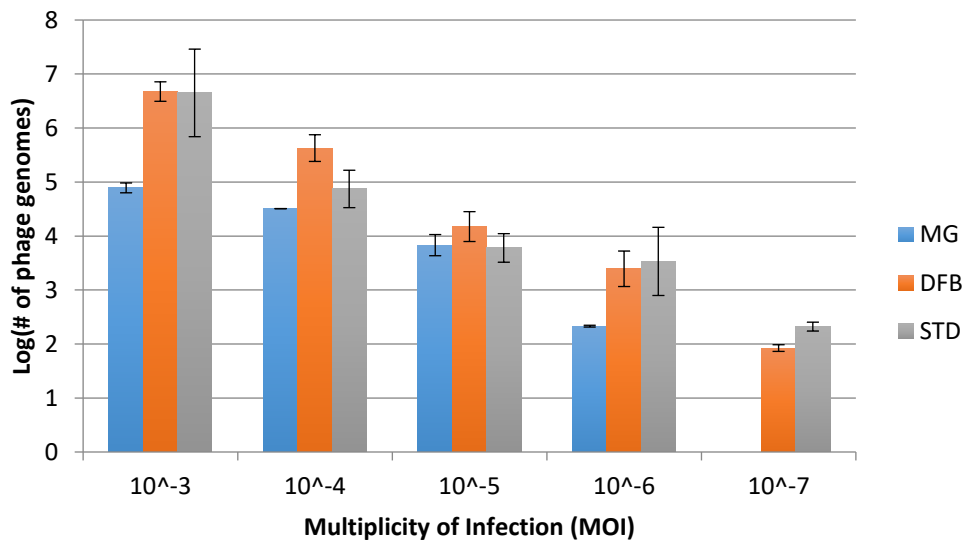


Figure S2. Enumeration of T4 bacteriophage content in supernatants of T4 bacteriophage-exposed *E. coli* K-12 substrains MG1655 and DFB1655 L9 and standard samples following an adsorption assay at MOIs of 10^{-3} – 10^{-6} . Supernatants were quantified using qPCR and previously designed primers (Table S2). The T4 bacteriophage standard curve, Figure 4A, was utilized to convert C_q values, Figure 4B, into Log[number of phage] at each MOI. Error bars report standard deviation. The data was generated by measuring two replicates per MOI and calculated the average. Please note that the standard samples refers to the positive controls which consist of bacteriophage and LB media only. Therefore, the standard samples do not contain an MOI, however, they do contain the same number of T4 used to create the MOIs in which they are grouped. Consequently, each standard sample should represent the maximum number of T4 that can be recovered at each MOI. MG = MG1655 supernatant, DFB = DFB1655 L9 Supernatant, and STD = standard sample supernatant.