Supplemental material

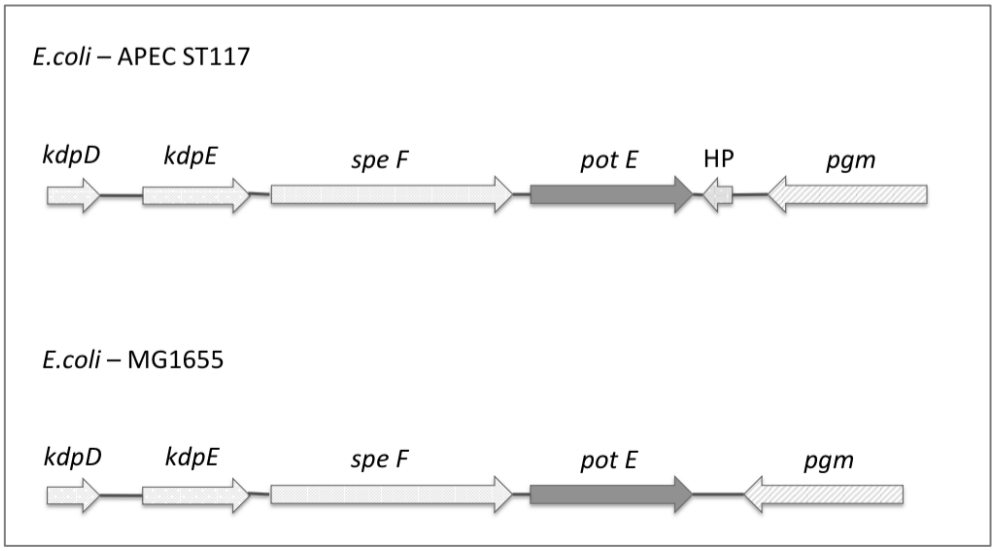

Fig S1 Schematic showing the genomic organization of *potE* gene in *E.coli* WT-ST117 and *E.coli* MG1655 based on WGS.

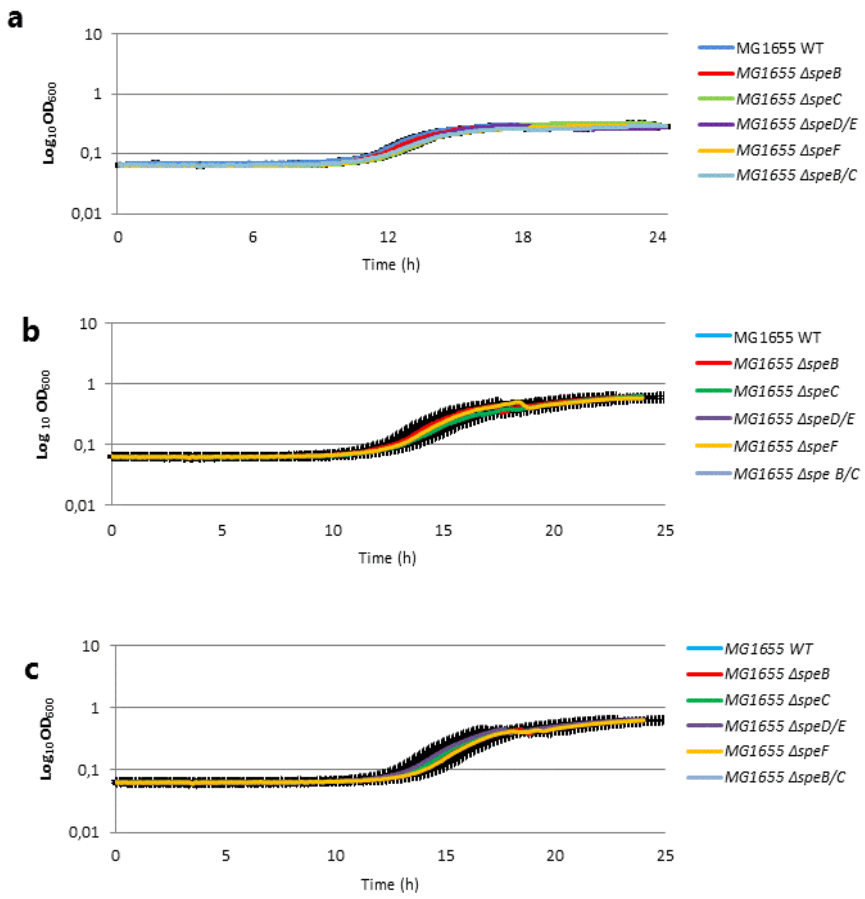

Fig S2A Growth phenotypes of polyamine biosynthesis mutants of *E.coli*-MG1655 in a) M9-minimal medium; b) M9-minimal medium supplemented with putrescine; c) M9-minimal medium supplemented with spermidine

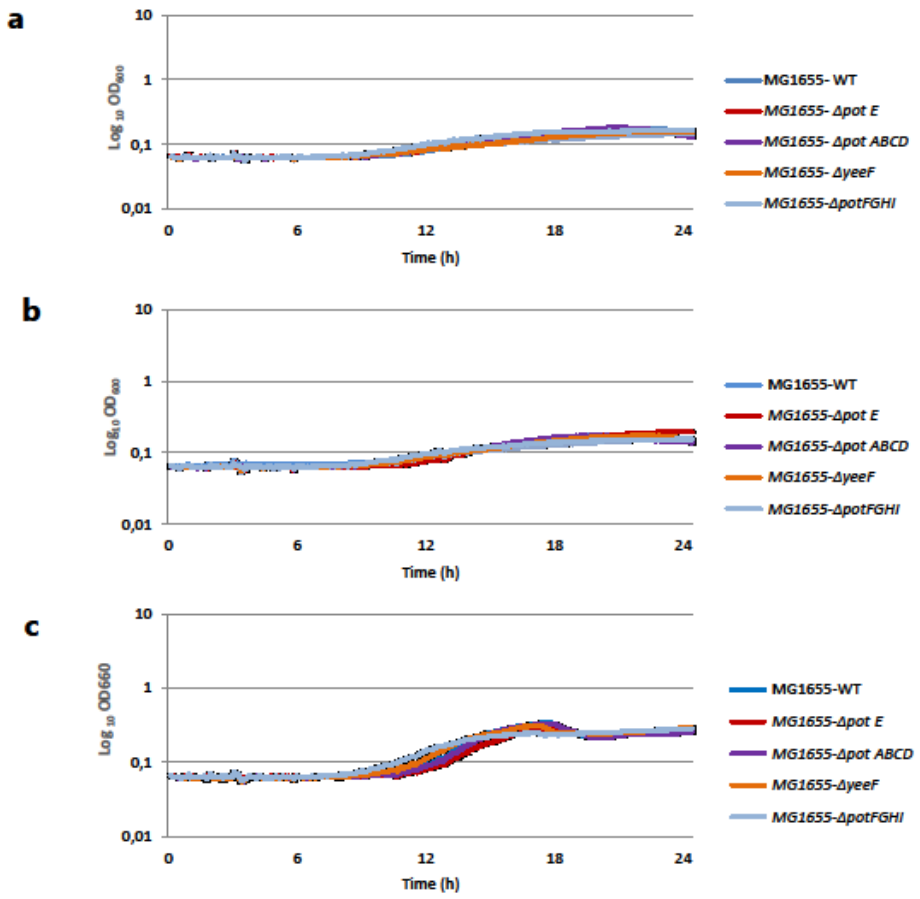

Fig S2B Growth phenotypes of polyamine transport mutants of *E.coli*-MG1655 in a) M9-minimal medium; b) M9-minimal medium supplemented with putrescine; c) M9-minimal medium supplemented with spermidine.

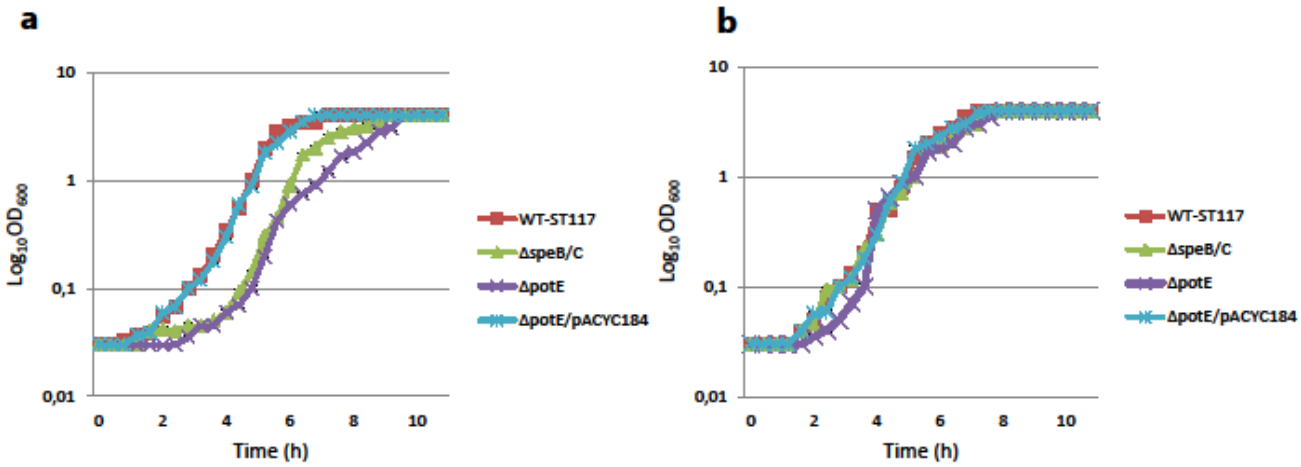

Fig S3 Growth curves determined by the standard cultivation method in a) M9-minimal medium; b) M9-minimal medium supplemented with putrescine.

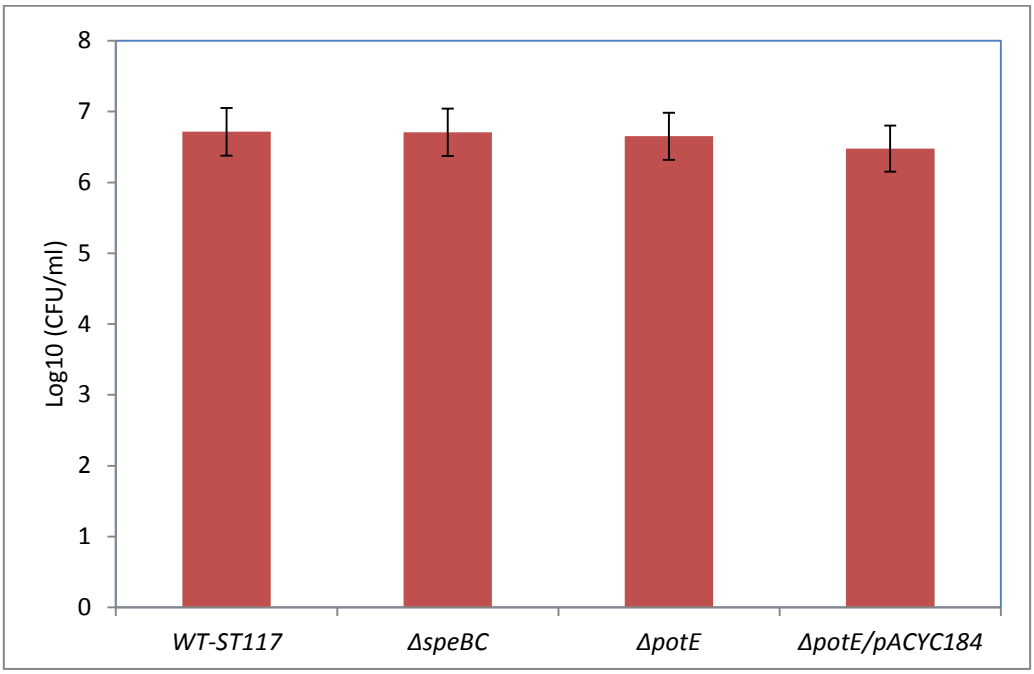

Fig S4 Growth of WT-ST117, Δ*potE*-ST117, and Δ*potE*/pACYC184 strains in the presence of 0.01% (w/v) SDS.

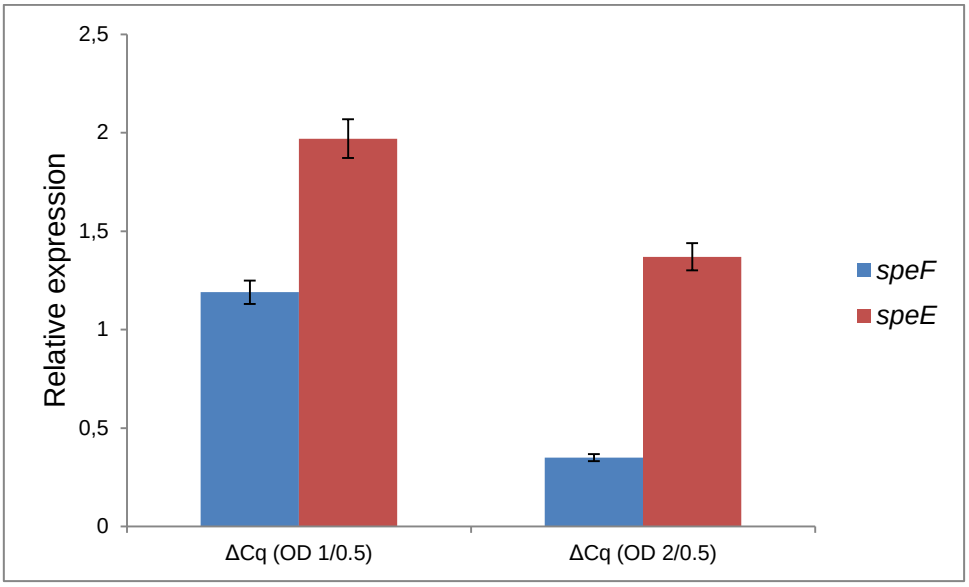

Fig S5 Expression levels of *speF* and *speE* genes in the mutant Δ*speB/C*-STS117 during growth in minimal medium.

Table S1 Correlation between CFU counting and OD_{600} values of WT, *ΔspeB/C*- ST117 and *ΔpotE*-ST117 grown in M9 medium supplemented with putrescine

	WT-ST117		***ΔspeB/C*- ST117**		***ΔpotE*- ST117**	
time	**CFU/ml**	**OD_{600}**	**CFU/ml**	**OD_{600}**	**CFU/ml**	**OD_{600}**
T0	4×10^6	0,064	$3,6 \times 10^6$	0,05	3×10^6	0,05
T1	$9,6 \times 10^7$	0,513	$8,9 \times 10^7$	0,55	$2,8 \times 10^6$	0,45
T2	$1,2 \times 10^8$	1,15	$1,6 \times 10^8$	1,42	$1,4 \times 10^8$	1
T3	$1,5 \times 10^8$	2,26	$7,8 \times 10^7$	1,9	$1,6 \times 10^8$	2
T4	6×10^8	3,15	9×10^8	2,8	$2,5 \times 10^8$	2,75

Table S2 Antimicrobial phenotypes of WT-ST117 strain detected by the disk-diffusion method.

Antimicrobial	mm	profile
Ampicillin	0	Resistant
Kanamycin	18	Susceptible
Chloramphenicol	22	Susceptible
Gentamicin	19	Susceptible
Trimethoprim	30	Susceptible

Table S3 Oligonucleotide sequences for PCR-based amplification.

Gene	Sequence	Primer application
*spe*B	fwd:5'GTGATTTCCGACTGATCGTATGCCGGAGCCACTTCCA CTA GTGTAGGCTGGAGCTGCTTC3' rev:5'AAGGGTTTTTTTATATCGACTTTGTAATAGGAGTCCAT CCCATATGAATATCCTCCTTAG3'	recombination
*spe*B	fwd:5'GTCAGGTAAACCGGCATATCACC3' rev:5'GACTGGGTGATTACTGGCGTGC3'	proof of insertion
*spe*C	fwd: 5'ACACAGACG GTTAGCCACT AATTACGCAAAGAAAAACGG GGTGTAGGCTGGAGCTGCTTC3' rev:5'AGGGTTTTCCACCTTGTCCGGTATTCTTACTTCCCCGA AACATATGAATATCCTCCTTAG3'	recombination
*spe*C	fwd: 5'TTACTTCAACACATAACCGTACAAC3' rev: 5'CAGCCTGTCAGTATGAAGAGAATTT3'	proof of insertion
*spe*B/C	rev_up: 5'CCAAGGTTGAAACGAAAGCGCAAAACCCGTTTC3' rev_down: 5'TTGACGGAGGGCTTTAAAAAAACGGGTCACCTT CTG 3' speC_fwd: 5'CACCACCAGTAAAATACCAATCC3' speC_rev: 5'GTTTGCCAGCAGCTTCAT3' dfrA14_fwd: 5'ACGGGTTTTGCGCTTTCGTTTCAACCTTGGTGT TTGG3dfrA14_rev: 5' GTGACCCGTTTTTTTAAAGCCCTCCGTCAATTTTATTACC3'	Recombination by Infusion® method + proof of insertion
*spe*D/E	fwd: 5'TTCGCTGGCGATGAAATGGAAGAGGGGATGAACTACTAC G GTGTAGGCTGGAGCTGCTTC3' rev:5'TTTTACGGGTGTTAACAAAGGAGGTATCAACCCATGG CCGCATATGAATATCCTCCTTAG3'	recombination
*spe*D/E	fwd: 5'AAAGAAAACCTGGCCTTGCTT3' rev: 5'AACGCTACACGACCAGTTTGGGCA3' fwd: 5'GAAGATACCGCCAGGATTCA3' rev: 5'TGATCGACGATGGTGTCAAT3'	proof of insertion/ gene expression assay
*spe*F	fwd: 5'TTTACGGCTG AACATACCGC ATTTTGCGAATGCCCATGCC GTGTAGGCTGGAGCTGCTTC3' rev:5'TTCTTCCGCGCACTGGTCGATTATGTCAATCACATATG AATATCCTCCTTAG3'	recombination