

Additional file 1. The primers used in this study

Primers	5'-3'	Usage or target gene
<i>cysE</i> -F	GGATCCTTGTTTAAGAAATAAATAA	Cloning primer
<i>cysE</i> -R	GAATTCCTATATATATACATTAT	
<i>cysK</i> -F	GGATCCATGTTATATAATAATGCATT	Cloning primer
<i>cysK</i> -R	GAATTCTTAAUATATTCCCATCGACA	
<i>cysE</i> -qPCR-F	ATCCAGCAGCTAGGTCTAAG	qPCR primers
<i>cysE</i> -qPCR-R	CACCCATTCCATGGTCTATC	
<i>cysK</i> -qPCR-F	TGGAATGGCAGGTTCCATAG	qPCR primers
<i>cysK</i> -qPCR-R	CCTGTCCAACCTCCACATAC	
<i>tcdA</i> -F	GGATCCATCTGACATAGTAAGTTAT	Cloning primer
<i>tcdA</i> -R	GAATTCCTTTGCACTTGCTTGATCAAA	
<i>tcdB</i> -F	GGATCCGGCAGTAACTTAACAGCAG	Cloning primer
<i>tcdB</i> -R	GAATTCTACCCATATTATATTGAGAA	
<i>tcdA</i> -qPCR-F	GCTTTCGCTTTAGGCAGTG	qPCR primers
<i>tcdA</i> -qPCR-R	TGGCTGGGTAGGTGTTG	
<i>tcdB</i> -qPCR-F	GGAAGGTGGCTCAGGTCATAC	qPCR primers
<i>tcdB</i> -qPCR-R	CCTGGTGTCCATCCTGTTCC	
RS07920-F	AGTTAGAGGCGAAGGAG	ferrous iron transport protein A
RS07920-R	CAATTGGTCACCAAGG	
RS07925-F	GGAGTTCCAGGAGTTATGTC	ferrous iron transport protein B
RS07925-R	TGATGGAGCTACCCATGAAG	
RS08035-F	GGCTCATCAGCATTTGG	metal ABC transporter substrate-binding protein
RS08035-R	AGGGCTTGGTTCTGAATC	
RS08045-F	TACTCCCAGTGGCATGTG	Metal ABC transporter permease
RS08045-R	AGCTCCTCCTGGACTAAG	
RS08770-F	CGCAGCTCAATTTGGGATAG	Iron chelate uptake ABC transporter family permease subunit
RS08770-R	AAUGTCACCTGCATCCAAG	
RS08785-F	AGCGATAGCAGCAGTAG	Siderophore ABC transporter substrate-binding protein
RS08785-R	AACTCGCCTTTGGAAGTC	
16S rRNA-F	CAGGAGAGGAGAGTGGAA	Internal reference
16S rRNA-R	TCAGCGTCAGTTACAGTC	