

Figure S1. (A) SDS-PAGE showing nickel affinity purified CysM protein. CFE: cell free extract; FT: Ni-column flow through; 21-28: Ni-column elution fractions; CysM: Buffer exchanged purified CysM protein. (B) Degradation of the aminoacrylate intermediate of purified CysM in the absence of sulfur acceptor is dependent on the concentration of sulfur acceptor and indicates spontaneous turnover. (C) Standard curve of cysteine used in the acid ninhydrin assays.

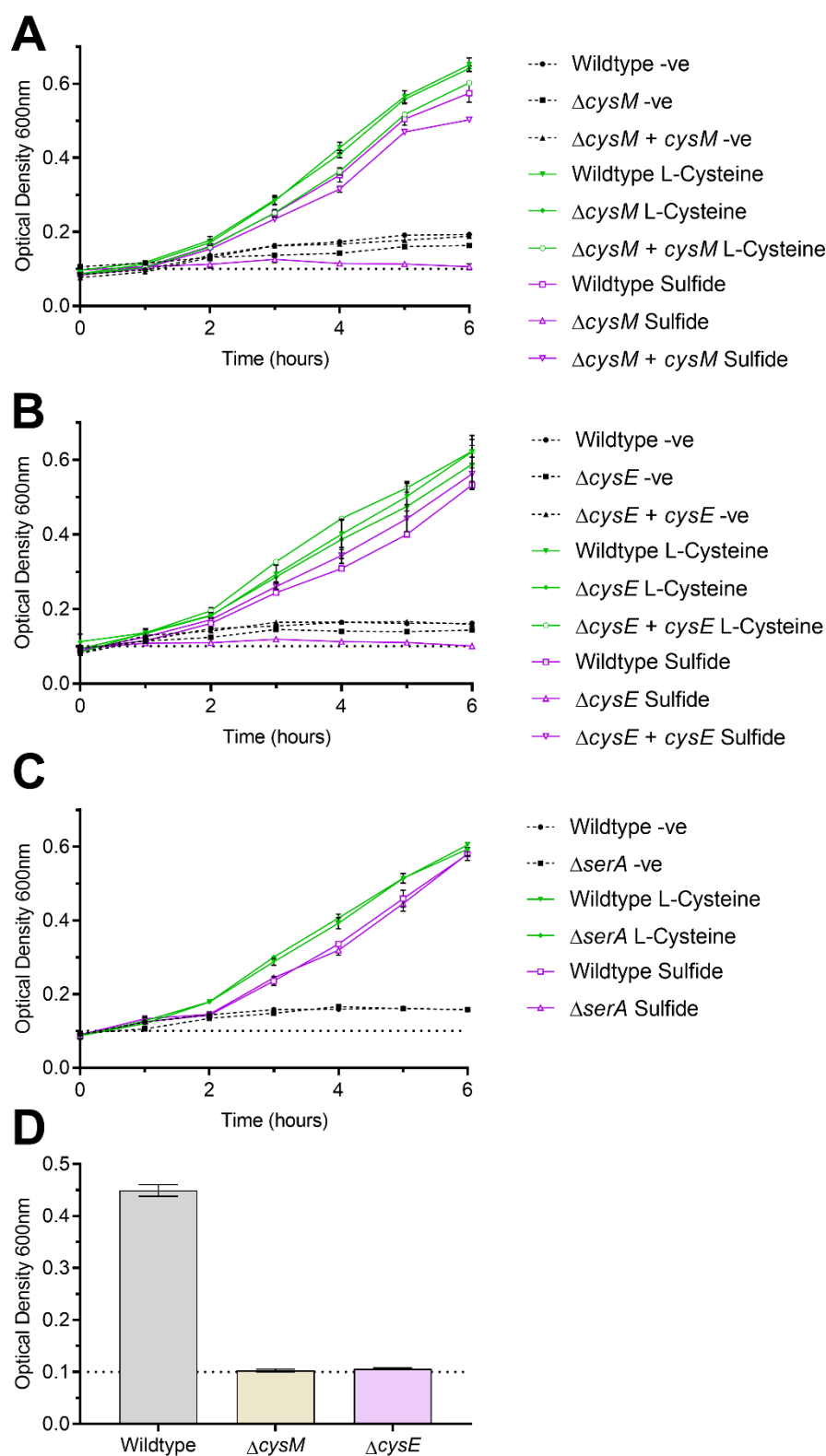


Figure S2. Full growth curves in sulfur deficient defined media with either no addition (-), cysteine or sulfide added, for wildtype and (A) $\Delta cysM$ and genetically complemented strain, (B) $\Delta cysE$ and genetically complemented strain and (C) $\Delta serA$. (D) Growth of wildtype, $\Delta cysM$ and $\Delta cysE$ with thiosulfate as sole sulfur source, displayed as the optical density reached after 6 h. In all panels, the inoculum level is indicated by the dashed line.

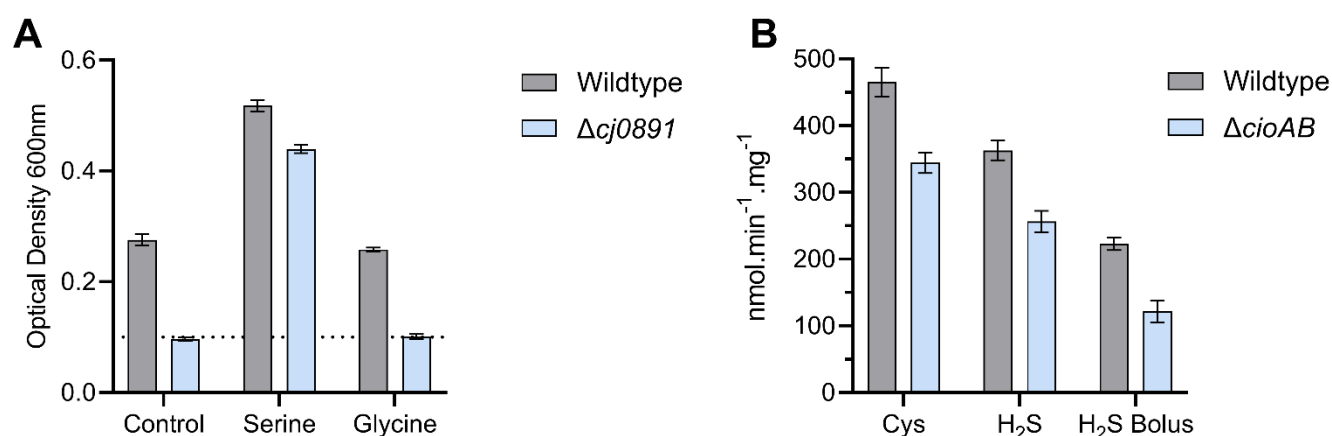


Figure S3. (A) Growth of *C. jejuni* NCTC11168 wildtype and *serA* (*cj0891*) mutant on L-Serine minus defined media with the addition of either L-Serine or glycine (10 mM final), displayed as the optical density at 600nm achieved after 6 h. Dotted line indicates the inoculum level. (B) Total oxidase specific activity, calculated in nmol oxygen consumed, per minute, per mg of total protein (see Figure 7).

Table S1. Primers used in this study.

Primer name	Sequence 5'–3'	Notes
pET280912 fwd	CAGTCATATGAAAGTACATGAAAAAGTAAGTGAG	Amplification of <i>cj0912c</i> for insertion into pET28a
pET280912 rev	ATGCCTCGAGTTAAGCAAAAAGATCGGT TGAG	
KanR fwd	ATTCTCCTTGTTTCTCATGTTTGACAGCTT AT	Amplification of KanR from pJMK30
KanR rev	GCACACCTTGGCTAGGTACTAAAACAAT TCAT	"
0912F1	GAGCTCGGTACCCGGGGATCCTCTAGAG TCATTAGTTGCTCAAACAGCTG	Amplification of downstream flank of <i>cj0912c</i>
0912R1	AAGCTGTCAAACATGAGAACCAAGGAG AATCACAAATCATAGCCAAAGAA	"
0912F2	GAATTGTTTTAGTACCTAGCCAAGGTGTG CAGGTATATCAAGTGGAGCAA	Amplification of upstream flank of <i>cj00912c</i>
0912R2	AGAATACTCAAGCTTGCATGCCTGCAGG TCGTCCGGCAACTCTTAGTTTA	"
0763F1	GAGCTCGGTACCCGGGGATCCTCTAGAG TCGCGATGGAGAAATT	Amplification of downstream flank of <i>cj0763c</i>
0763R1	AAGCTGTCAAACATGAGAACCAAGGAG AATATTCCGCTAATCATTCTAGC	"
0763F2	GAATTGTTTTAGTACCTAGCCAAGGTGTG CCATTAGAGCCATAGATGCAA	Amplification of upstream flank of <i>cj00763c</i>

0763R2	AGAATACTCAAGCTTGCATGCCTGCAGG TCGTGTCAAAATCAGGTTACC	“
0891F1	GAGCTCGGTACCCGGGGATCCTCTAGAG TCTAAGCACTTCTATGCTTGAAA	Amplification of downstream flank of <i>cj0891c</i>
0891R1	AAGCTGTCAAACATGAGAACCAAGGAG AATGCAACTTCAATATCGCTTAG	“
0891F2	GAATTGTTTTAGTACCTAGCCAAGGTGTG CCAGTGTTTCAGGAACAGTGT	Amplification of upstream flank of <i>cj0891c</i>
0891R2	AGAATACTCAAGCTTGCATGCCTGCAGG TCGCTCATTGAAATCAAAAGGT	“
pRRA0912 fwd	AATAATGACCCGGGGATCCTCTAGAAAA AAGGATATTAAAATTATGAAAGTACAT	Amplification of <i>cj0912c</i> for complementation plasmid pRRA
pRRA0912 rev	TTGAAATCTAAACAAGAATCAATTGGCT TTATCTTATTGATGAAAAAGG	“
pRRA0763 fwd	AATAATGACCCGGGGATCCTCTAGAGCA TAGGAGTTTAGATGAATTTT	Amplification of <i>cj0763c</i> for complementation plasmid pRRA
pRRA0763 rev	TTGAAATCTAAACAAGAATCAATTGGCA GAAAATTGCATTTTAC	“

Table S2. Sulfur limited defined media used in this study.

Inorganic salts	mM final
Magnesium Sulfate (MgSO ₄ ·7H ₂ O)	1
Potassium Chloride (KCl)	5
Sodium Bicarbonate (NaHCO ₃)	15
HEPES	15
Sodium Chloride (NaCl)	120
Sodium Phosphate monobasic (NaH ₂ PO ₄ ·H ₂ O)	1
Ammonium sulfate	5
Amino acids	mM final
L-Glycine	2
L-Glutamate K salt	2
L-Aspartate K salt	2
L-Alanine	2

L-Arginine hydrochloride	2
L-Asparagine.H ₂ O	2
L-Tyrosine disodium salt dihydrate	2
L-Histidine hydrochloride-H ₂ O	2
L-Isoleucine	2
L-Leucine	2
L-Lysine hydrochloride	2
L-Phenylalanine	2
L-Threonine	2
L-Valine	2
L-Proline	2
L-Tryptophan	2
L-Methionine	2
L-Serine	5
L-Glutamine	5
Other	µM final
Sodium Formate	5000
Sodium Pyruvate	5000
Niacinamide	50
D-Calcium pantothenate	10
Vitamin B12	1
i-Inositol	10
Biotin	10
Folic acid	10
Pyridoxal hydrochloride	10
Riboflavin	10

Thiamine hydrochloride	10
Sodium Metabisulphite	10
Ferrous Sulphate.7H ₂ O	25
Ascorbic Acid	50
Metals	µM final
EDTA disodium .2H ₂ O	10
Boric acid	0.1
CuSO ₄ .5H ₂ O	1
ZnCl ₂	1
MnCl ₂ .4H ₂ O	1
CoCl ₂ .6H ₂ O	1
NiCl ₂ .6H ₂ O	1
Na ₂ MoO ₄ .2H ₂ O	1
Na ₂ WO ₄ · 2H ₂ O	0.1
Sodium Selenite	0.1