Supplementary Table 1. Summary of significantly differentially expressed genes (sDEGs) in Δ*metC* vs. Pcc21 wild-type

Function (Annotated with multiple database)	Gene name	Gene ID	Log_2FC Δ*metC*/WT
Methionine pathway			
Methionine biosynthetic/salvage process			
Homoserine *O*-succinyltransferase	*metA*	D5081_13740	0.9
Homoserine *O*-acetyltransferase	*metX*	D5081_04530	–0.23
Cystathionine γ-synthase	*metB*	D5081_01340	–1.31
Cobalamin-independent methionine synthase	*metE*	D5081_02585	–3.47
Cobalamin-dependent methionine synthase	*metH*	D5081_18640	0.5
Homocysteine *S*-methyltransferase	*mmuM*	D5081_16245	–0.19
S-Methylmethionine permease	*mmuP*	D5081_16250	–0.18
5,10-Methylenetetrahydrofolate reductase	*metF*	D5081_01380	–2.78
S-Adenosylhomocysteine nucleosidase	*mtnN*	D5081_12855	–0.75
Methylthioribose-1-phosphate isomerase	*mtnA*	D5081_10690	–1.38
Enolase-phosphatase	*mtnC*	D5081_00185	–0.28
The methionine ABC uptake transporter (MUT) family			
d-Methionine-binding lipoprotein MetQ	*metQ*	D5081_21875	0.05
Bifunctional aspartokinase/homoserine dehydrogenase	*metL*	D5081_01345	–1.12
Methionine import ATP-binding protein MetN	*metN*	D5081_04150	–1.19
d-Methionine transport system permease protein MetI	*metI*	D5081_21870	–0.42
Probable d-methionine transport system permease protein MetI	*metI*	D5081_10335	–0.51
Probable d-methionine transport system permease protein MetI	*metI*	D5081_04145	–0.9
PCWDEs			
Pectinesterase A	*pemA*	D5081_19400	–0.27
Pectinesterase B	*pemB*	D5081_02165	–1.05
Pectin lyase	*pnl*	D5081_20895	1.35
Pectate lyase	*pel*	D5081_07980	3.17
Pectate lyase A	*pelA*	D5081_09640	1.89
Pectate lyase III	*pelIII*	D5081_07060	3.17
Pectate lyase II	*pelII*	D5081_07065	–0.75
Pectate lyase II	*pelII*	D5081_02775	–1.05
Pectate lyase I	*pelI*	D5081_02780	1.23
Pectate disaccharide-lyase	*pelW*	D5081_03000	–0.68
Exo-poly-α-d-galacturonosidase		D5081_12620	2.3
Endopolygalacturonase	*peh*	D5081_14285	–1.06
Proteases secretion protein PrtF	*prtF*	D5081_16165	–1.47
Proteases secretion protein PrtE	*prtE*	D5081_16170	–1.19
Proteases secretion ATP-binding protein PrtD	*prtD*	D5081_16175	–1.47
Proteases secretion protein PrtE	*prtE*	D5081_21005	–1.27
Flagellar			
Flagellar transcriptional regulator FlhD	*flhD*	D5081_15070	1.51
Flagellar transcriptional regulator FlhC	*flhC*	D5081_15075	–0.02
Motility protein A	*motA*	D5081_15080	–0.43
Motility protein B	*motB*	D5081_15085	–0.15
Flagellar regulator flk	*flk*	D5081_07665	–0.43
Flagellar biosynthetic protein FlhB	*flhB*	D5081_15125	1.23
Flagellar biosynthesis protein FlhA	*flhA*	D5081_15130	1.16

Flagellar protein FlhE	*flhE*	D5081_15135	2.19
Flagella synthesis protein FlgN	*flgN*	D5081_15140	0.36
Flagellar biosynthetic protein FliR	*fliR*	D5081_15210	1.08
Flagellar biosynthetic protein FliQ	*fliQ*	D5081_15215	1.29
Flagellar biosynthetic protein FliP	*fliP*	D5081_15220	1.21
Flagellar protein FliL	*fliL*	D5081_15240	0.78
Flagellar protein FliJ	*fliJ*	D5081_15250	1.25
Flagellum-specific ATP synthase FliL	*fliL*	D5081_15255	0.79
Flagellar assembly protein FliH	*fliH*	D5081_15260	0.85
Flagellar motor switch protein FliG	*fliG*	D5081_15265	1.49
Flagellar protein FliT	*fliT*	D5081_15280	–1.02
Flagellar secretion chaperone FliS	*fliS*	D5081_15285	–0.46
Flagellar hook-associated protein II	*fliD*	D5081_15290	–0.65
Flagellin	*fliC*	D5081_15295	–1.81
Secretion systems and effectors			
Type I secretion system protein PrsE	*prsE*	D5081_14290	0.82
Type II secretion system protein N	*outN*	D5081_07915	–0.03
Type II secretion system protein M	*outM*	D5081_07920	–
Type II secretion system protein L	*gspL*	D5081_07925	0.11
Type II secretion system protein K	*outK*	D5081_07930	0.32
Type II secretion system protein J	*gspJ*	D5081_07935	–0.33
Type II secretion system protein I	*gspI*	D5081_07940	–0.2
Type II secretion system protein H	*gspH*	D5081_07945	–0.06
Type II secretion system protein G	*gspG*	D5081_07950	0.34
Type II secretion system protein F	*gspF*	D5081_07955	0.57
Type II secretion system protein E	*gspE*	D5081_07960	0.48
Type II secretion system protein C	*gspC*	D5081_07970	1.25
Type III secretion system secretin	*sctC*	D5081_10185	–1.09
Type IV secretion system protein VirB1	*virB1*	D5081_16580	–
Type IV secretion system protein VirB4	*virB4*	D5081_16590	–
Type IV secretion system protein PtlE	*ptlE*	D5081_16610	–
Type IV secretion system protein VirB9	*virB9*	D5081_16615	–
Type IV secretion system protein VirB10	*virB10*	D5081_16620	–
Type IV secretion system protein VirB11	*virB11*	D5081_16625	–
Type VI secretion system sheath protein TssB1	*tssB*	D5081_10835	–1.44
Type VI secretion system sheath protein TssC1	*tssC*	D5081_10840	–1.94
Type VI secretion system component TssF1	*tssF*	D5081_10850	–2.27
Type VI secretion system component TssK1	*tssK*	D5081_10870	–2.68
Type VI secretion system component TssM1	*tssM*	D5081_10900	–1.86
Type VI secretion system protein VgrGA	*vgrGA*	D5081_21830	–0.46
Type VI secretion system protein VgrGA	*vgrGA*	D5081_00820	–1.01
Type VI secretion system spike protein VgrG2	*vgrG2*	D5081_09680	–
Type VI secretion system spike protein VgrG2	*vgrG2*	D5081_10660	–1.5
Major exported protein	*hcpA*	D5081_00825	–1.47
Major exported protein	*hcpA*	D5081_04930	–
Major exported protein	*hcpA*	D5081_09540	0.88
Major exported protein	*hcpA*	D5081_10815	–
Major exported protein	*hcpA*	D5081_10915	–0.98
Major exported protein	*hcpA*	D5081_10950	–