

Additional file 5. Bacterial strains and vectors used

Strain or plasmid	Relevant characteristics	Source or reference
<i>E. coli</i> DH5 α	F ⁻ <i>endA1 hsdR17</i> (rK ⁻ mK ⁺) <i>supE44 thi-1 λ⁻ gyrA96 relA1</i> Δ (<i>lacZYA argF</i>) U169 (Φ 80 <i>lacZ</i> Δ M15) <i>recA</i>	Roche Diagnostics
<i>E. coli</i> BL21(DE3)	F ⁻ <i>ompT hsdS</i> (rB ⁻ mB ⁻) <i>gal dcm</i> (DE3)	Novagen
<i>R. cellulolyticum</i>	Wild-type, H10, ATCC35319, DSM 5812	DSMZ
<i>R. cellulolyticum</i> MTL <i>cbpA</i>	ATCC35319, <i>cbpA</i> ::intron, Erm ^r	This study
<i>R. cellulolyticum</i> MTL <i>cdpA</i>	ATCC35319, <i>cdpA</i> ::intron, Erm ^r	This study
<i>R. cellulolyticum</i> MTL <i>cdpB</i>	ATCC35319, <i>cdpB</i> ::intron, Erm ^r	This study
<i>R. cellulolyticum</i> MTL <i>cdpC</i>	ATCC35319, <i>cdpC</i> ::intron, Erm ^r	This study
pET22b(+)	<i>E. coli</i> expression vector, Amp ^r	Novagen
pET <i>cbpA</i>	pET22b+ derivative carrying the NdeI-XhoI fragment encoding CbpA	[10]
pET <i>cdpA</i>	pET22b+ derivative carrying the NdeI-XhoI fragment encoding CdpA	This study
pET <i>cdpB</i>	pET22b+ derivative carrying the NdeI-XhoI fragment encoding CdpB	This study
pET <i>cdpC</i>	pET22b+ derivative carrying the NdeI-XhoI fragment encoding CdpC	This study
pMTL007	<i>E. coli/Clostridium</i> shuttle vector (ColE1, pCB102)LI. <i>ltr</i> Bintron (<i>ermBtdRAM2</i>) under the control of <i>P</i> <i>fac</i> , <i>ltrA</i> ; Cm ^r /Tm ^r	[25]
pMTL <i>cbpA</i>	pMTL007 derivative targeting <i>cbpA</i> (locus Ccel_2109)	This study
pMTL <i>cdpA</i>	pMTL007 derivative targeting <i>cdpA</i> (locus Ccel_1439)	This study
pMTL <i>cdpB</i>	pMTL007 derivative targeting <i>cdpB</i> (locus Ccel_2354)	This study
pMTL <i>cdpC</i>	pMTL007 derivative targeting <i>cdpC</i> (locus Ccel_3412)	This study
pSOSzeroTm	<i>E. coli/Clostridium</i> shuttle vector (ColE1, pIM13); Ap ^r , Cm ^r /Tm ^r	[31]
pSOS <i>cbpA</i>	pSOS956 <i>E. coli/Clostridium</i> shuttle vector (ColE1, pIM13); Ap ^r , Cm ^r /Tm ^r , derivative, carrying the BamHI-NarI fragment encoding full length <i>cbpA</i> , under the control of a weakened <i>Clostridium acetobutylicum</i> <i>thiolase</i> gene promotor (<i>P</i> <i>thi</i>)	[10]

Ap^r, ampicilline resistance; Erm^r, erythromycin resistance; Cm^r/Tm^r, chloramphenicol/thiamphenicol resistance