Single	Single-nucleotide polymorphism in the sequence of both adapted strains compared to the original mutant MTLcuaD strain											
Position	Reference base	Observed base	Amino acid change	Effect	Functional class	Localization	Predicted gene product					
455589	А	Т	NA	Upstream None Bw Ccel_R0007 / Ccel_R0008		rRNA-16S / tRNA-Ala						
2127097	G	T	NA	LINCTROOM I NONG I		Bw Ccel_1774 / Ccel_R0045	ATP dependant helicase- nuclease subunit A / tRNA-Gln					
2127098	С	Т	*1249	Synonymous_stop	Silent	Ccel_1774	ATP dependant helicase- nuclease subunit A					
2606472	С	G	D380H	Non_synonymous_ Coding	Missense	Ccel_2228	Hypothetical protein					
2914046	А	С	NA	Upstream	None	Bw Ccel_R0059 / Ccel_R0058	rRNA-16S / rRNA-23S					
4055304	А	G	NA	Upstream	None	Bw Ccel_R0088 / Ccel_R0087	rRNA-16S / rRNA-23S					
2316753	С	Т	G263S	NON_SYNONYMOUS_ CODING	MISSENSE	Ccel_1956	cell wall associated hydrolase					

Insertions/deletions in the sequence of both adapted strains compared to the original mutant MTLcuaD strain											
Position	Reference base	Observed base	Effect	Functional class	Localization	Gene product					
455591	А	Act	Upstream	None	Bw Ccel_R0007 / Ccel_R0008	rRNA-16S / tRNA-Ala					
455593	Tgg	Т	Upstream	None	Bw Ccel_R0007 / Ccel_R0008	rRNA-16S / tRNA-Ala					
2471924	Gga	G	Upstream	None	Bw Ccel_2112 / Ccel_2111	CuaA / CuaB					

Additional file 4. Mutations found in the sequence of the adapted MTLcuaD mutant strain. The table reports all single-nucleotide polymorphism (SNP) and insertions/deletions mutations (In/Del) type which were common to two individual MTLcuaD mutant strains clones and absent from the MTLcuaD mutant strain. (white background), and the mutations that were found only in the mutant strain (grey background). (NA: not applicable; \*: stop codon; Bw: between)