

## Oligonucleotide primers used for targeted mutagenesis

Primer name	Sequence <sup>1</sup>	Function
pJIR750aiXmalF	CAAAACCCGGGATAATTATCCTTACCAGCC CATAGGGTGCGCCAGATAGG <sup>1</sup>	Forward primer to clone intron+ltrA from pJIR750ai
pJIR750aiXhoIR	CAAAACTCGAGCGGGTGCTCGACATTCAC TGTGTTTATGAATCACGTGAC	Reverse primer to clone intron+ltrA from pJIR750ai
EBSu	CGAAATTAGAACTTGCCTCAGTAAAC	EBS universal primer for cross-over PCR
Mdh217sIBS	AAAACCCGGGATAATTATCCTTAGATTGCG ATGTTGTGCGCCAGATAGGGTG	IBS primer for cross-over PCR to retarget <i>Ccel_0137</i>
Mdh217sEBS1d	CAGATTGTACA <sup>1</sup> AAATGTGGTGATAACAGATA AGTCGATGTTATTAACCTACCTTTCTTTGT	EBS1d primer for cross-over PCR to retarget <i>Ccel_0137</i>
Mdh217sEBS2	TGAACGCAAGTTTCTAATTTTCGATTCAATC TCGATAGAGGAAAGTGTCT	EBS2 primer for cross-over PCR to retarget <i>Ccel_0137</i>
Ldh517sIBS	AAAACCCGGGATAATTATCCTTAAACGTCC ATGCTGTGCGCCAGATAGGGTG	IBS primer for cross-over PCR to retarget <i>Ccel_2485</i>
Ldh517sEBS1d	CAGATTGTACA <sup>1</sup> AAATGTGGTGATAACAGATA AGTCCATGCTTATAACTACCTTTCTTTGT	EBS1d primer for cross-over PCR to retarget <i>Ccel_2485</i>
Ldh517sEBS2	TGAACGCAAGTTTCTAATTTTCGGTTACGTT CCGATAGAGGAAAGTGTCT	EBS2 primer for cross-over PCR to retarget <i>Ccel_2485</i>
MdhF	GGGATTTTAATGGGTTTTAAAGTTG	Forward primer to screen <i>Ccel_0137</i> mutant and sequence
MdhR	TCCAGGTGAATAAGCTAAAGAAAGA	Reverse primer to screen <i>Ccel_0137</i> mutant and sequence
LdhF	TATACTTTTGCACCCAGAATGTTTT	Forward primer to screen <i>Ccel_2485</i> mutant and sequence
LdhR	TGACTGTACGGGTTTTATCAATTT	Reverse primer to screen <i>Ccel_2485</i> mutant and sequence
pWH199F2	ATAAGTTATGGTTGGAATTGTGAGC	pWH199 plasmid specific primer to screen and sequence
pintronF1	CCTATGGGAACGAAACGAAA	Intron-specific primer to screen and sequence
pintronR1	CGAGTACTCCGTACCCTTGC	Intron-specific primer to screen and sequence
Pta370sIBS	AAAACCCGGGATAATTATCCTTAATGGTCC CAGAGTGCGCCAGATAGGGTG	IBS primer for cross-over PCR to retarget <i>Ccel_2137</i> , sense orientation
Pta370sEBS1d	CAGATTGTACA <sup>1</sup> AAATGTGGTGATAACAGATA AGTCGCAGGAGCTAACTTACCTTTCTTTGT	EBS1d primer for cross-over PCR to retarget <i>Ccel_2137</i> , sense orientation
Pta370sEBS2	TGAACGCAAGTTTCTAATTTTCGGTTACCAT CCGATAGAGGAAAGTGTCT	EBS2 primer for cross-over PCR to retarget <i>Ccel_2137</i> , sense orientation
Pta695aIBS	AAAACCCGGGATAATTATCCTTACTGGACC TTTTTGTGCGCCAGATAGGGTG	IBS primer for cross-over PCR to retarget <i>Ccel_2137</i> , antisense orientation
Pta695aEBS1d	CAGATTGTACA <sup>1</sup> AAATGTGGTGATAACAGATA AGTCCTTTTCTAACTTACCTTTCTTTGT	EBS1d primer for cross-over PCR to retarget <i>Ccel_2137</i> , antisense orientation
Pta695aEBS2	TGAACGCAAGTTTCTAATTTTCGGTTCCAG TCGATAGAGGAAAGTGTCT	EBS2 primer for cross-over PCR to retarget <i>Ccel_2137</i> , antisense orientation
Pta701aIBS	AAAACCCGGGATAATTATCCTTAGAAGACC TGGAGGTGCGCCAGATAGGGTG	IBS primer for cross-over PCR to retarget <i>Ccel_2137</i> , antisense orientation
Pta701aEBS1d	CAGATTGTACA <sup>1</sup> AAATGTGGTGATAACAGATA AGTCCTGGAGCTTAACTTACCTTTCTTTGT	EBS1d primer for cross-over PCR to retarget <i>Ccel_2137</i> , antisense orientation
Pta701aEBS2	TGAACGCAAGTTTCTAATTTTCGATTCTTCT CGATAGAGGAAAGTGTCT	EBS2 primer for cross-over PCR to retarget <i>Ccel_2137</i> , antisense orientation
Pta426aIBS	AAAACCCGGGATAATTATCCTTATTTGCC CGGGAGTGCGCCAGATAGGGTG	IBS primer for cross-over PCR to retarget <i>Ccel_2137</i> , antisense orientation
Pta426aEBS1d	CAGATTGTACA <sup>1</sup> AAATGTGGTGATAACAGATA AGTCCCGGAGCTAACTTACCTTTCTTTGT	EBS1d primer for cross-over PCR to retarget <i>Ccel_2137</i> , antisense orientation
Pta426aEBS2	TGAACGCAAGTTTCTAATTTTCGGTTGCAAA TCGATAGAGGAAAGTGTCT	EBS2 primer for cross-over PCR to retarget <i>Ccel_2137</i> , antisense orientation
Ack436sIBS	AAAACCCGGGATAATTATCCTTACCTATCG TAGCTGTGCGCCAGATAGGGTG	IBS primer for cross-over PCR to retarget <i>Ccel_2136</i> , sense orientation
Ack436sEBS1d	CAGATTGTACA <sup>1</sup> AAATGTGGTGATAACAGATA AGTCGTAGCTGTTAACTTACCTTTCTTTGT	EBS1d primer for cross-over PCR to retarget <i>Ccel_2136</i> , sense orientation
Ack436sEBS2	TGAACGCAAGTTTCTAATTTTCGGTTATAGG TCGATAGAGGAAAGTGTCT	EBS2 primer for cross-over PCR to retarget <i>Ccel_2136</i> , sense orientation
PtaF1	TATAACAGTTTCAACGGTTTGTGAA	Forward primer to screen <i>Ccel_2137</i> mutant and sequence
PtaR1	AACTCCCGCATTTATACTAAAC	Reverse primer to screen <i>Ccel_2137</i> mutant and sequence
PtaF2	CTTCTGAAAGTAACGATATCAGAA	Forward primer to screen <i>Ccel_2137</i> mutant and sequence
PtaR2	TACAGCCTTTGAAAGGTACATTAAC	Reverse primer to screen <i>Ccel_2137</i> mutant and sequence
AckF	GTTTTAGTTATAAATGCGGGGAGTT	Forward primer to screen <i>Ccel_2136</i> mutant and sequence
AckR	TGTTAACAGCACAAATACTTGAACC	Reverse primer to screen <i>Ccel_2136</i> mutant and sequence

<sup>1</sup> Restriction enzyme sites in primers are underlined.