

Supplementary material:

Table S1. List of primer used in this study.

No.	sequence	description
605	5'-GGATCCGGGACATTTAGTCCATTAC-3'	Forward primer for upstream region <i>ΔaapF</i> with <i>PstI</i> restriction site
606	5'- AATTTATATACTTTTACTGTGTGAATATACACAAGTAGATAA AGTTAAATATTTTTTATA-3'	Reverse primer for upstream region <i>ΔaapF</i> , overlapping region
607	5'- TATAAAAAATATTTAACTTTATCTAGTTGTGTATATTCACAC AGTAAAAGTATATAAATT-3'	Forward primer for downstream region <i>ΔaapF</i> , overlapping region
642	5'-GCGGGATCCTCTACCGGCAGGGATAGAAG-3'	Reverse primer for downstream region <i>ΔaapF</i> with <i>BamHI</i> restriction site
583	5'-CTGCTATTCTATCTCCTGCAGG-3'	Forward sequencing primer <i>ΔaapF</i>
584	5'-CAGTGTGCTGGAGCTC-3'	reverse sequencing primer <i>ΔaapF</i>
668	5'- CATCTGCAGGCGCCATGCTCTTCTTCAGG-3'	Forward primer for upstream region <i>ΔaapA</i> with <i>PstI</i> restriction site
669	5'-GATATATTAGCGTATAACGTGATATCATGGTAATC-3'	Reverse primer for upstream region <i>ΔaapA</i> overlapping region
670	5'-GATATCACGTTATACGCTAATATATCAAGGGTAAAAAC- 3'	Forward primer for downstream region <i>ΔaapA</i> overlapping region
671	5'-CATGGATCCGTTTCTTCGGATATGATGTC-3'	Reverse primer for downstream region <i>ΔaapA</i> with <i>BamHI</i> restriction site
672	5'-GCTCCAGGTATAAAGGTCTC-3'	Forward sequencing primer <i>ΔaapA</i>
673	5'-GGTCAAGATTGTTGACAATG-3'	reverse sequencing primer <i>ΔaapA</i>
674	5'-CATCTGCAGCTCTCGCTTAAGTACTGAAC-3'	Forward primer for upstream region <i>ΔaapB</i> with <i>PstI</i> restriction site
675	5'-CTTATCCTTGCTTGCTCTTCTTACCTCTATATTC-3'	Reverse primer for upstream region <i>ΔaapB</i> , overlapping region
676	5'-GAAGAGCAAGCAAGGATAAGATAATAACAATATCC-3'	Forward primer for downstream region <i>ΔaapB</i> , overlapping region

677	5'-CATGGATCCCACTCAAAGCTCCGTAAGAC -3'	Reverse primer for downstream region <i>ΔaapB</i> with <i>Bam</i> HI restriction site
678	5'-GCGACTCCCTGAAGTCTATC-3'	Forward sequencing primer <i>ΔaapB</i>
679	5'-ACCTGGTTTAGCTCCTTGTC-3'	reverse sequencing primer <i>ΔaapB</i>
680	5'-CATTGGGCCCGTTTGC GTTTGGTCTGATCC-3'	Forward primer for upstream region <i>ΔaapX</i> with <i>Ap</i> al restriction site
681	5'-GAGGATTATGGGATGAAAGAAAGTTTTAC-3'	Reverse primer for upstream region <i>ΔaapX</i> , overlapping region
682	5'-CTTTCATCCCATAATCCTCCCTTAAATTTAG-3'	Forward primer for downstream region <i>ΔaapX</i> , overlapping region
683	5'-CATTCTGCAGTATTTGGTGCTCTCGGAAAG-3'	Reverse primer for downstream region <i>ΔaapX</i> with <i>Pst</i> I restriction site
684	5'-GACTATTTTCTCTCTTGATAAAATG-3'	Forward sequencing primer <i>ΔaapX</i>
685	5'-ATAAAGCAAGGCGTGATCTC-3'	reverse sequencing primer <i>ΔaapX</i>
686	5'-CATATCCATGGGCGTGCACTCAAATC-3'	Forward primer for upstream region <i>ΔaapE</i> with <i>Nco</i> I restriction site
687	5'-GTAAATTTACTCGTGTGCTAAAGTATAACCTAATC-3'	Reverse primer for upstream region <i>ΔaapE</i> , overlapping region
688	5'-CTTTAGCAACACGAGTAAATTTACTAAGTGCCATAG-3'	Forward primer for downstream region <i>ΔaapE</i> , overlapping region
689	5'-CATTGGATCCGAGTGGATTTGAGGAATATG-3'	Reverse primer for downstream region <i>ΔaapE</i> with <i>Bam</i> HI restriction site
690	5'-TTGTGGGTTATTTGGTAATC-3'	Forward sequencing primer <i>ΔaapE</i>
691	5'-CTCAGTCTAGCGCATATAAG-3'	reverse sequencing primer <i>ΔaapE</i>
696	5'-CTCTAATTTAACGTCTCAGTAACTAGC-3'	<i>aapA</i> -qRT-PCR-fw
697	5'-CCTACTTGTTCCATAGGATTGTTAGG-3'	<i>aapA</i> -qRT-PCR-rev
3504	5'-CTTCTATCCCTGCCGGTAGAAC-3'	<i>aapB</i> -qRT-PCR-fw
3505	5'-CTGTGTATGATGCACCTGGAGAG-3'	<i>aapB</i> -qRT-PCR-rev
3512	5'-CTCCTGACTACCAACTGACTATTTATC-3'	<i>aapF</i> -qRT-PCR-fw
3513	5'-GTTCAACCAGTAGAATAGCTCTTTACAC-3'	<i>aapF</i> -qRT-PCR-rev
3510	5'-GACATATATGGGGACATTTAGTCCATTC-3'	<i>aapE</i> -qRT-PCR-fw
3511	5'-GACATATATGGGGACATTTAGTCCATTC-3'	<i>aapE</i> -qRT-PCR-rev

698	5'-GAAAGGTAATCCTTCAACTCGGATAAC-3'	<i>aapX</i> -qRT-PCR-fw
699	5'-GAAGAGAGTATGCGAAACTATACATAAC-3'	<i>aapX</i> -qRT-PCR-rev
1480	5'-CCT GCA ACA TCT ATC CAT AAC ATA CCG A-3'	<i>secY</i> -housekeeping-qRT-PCR-fw
1481	5'-CCT CAT AGT GTA TAT GCT TTA GTA GTA G-3'	<i>secY</i> -housekeeping-qRT-PCR-rev

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