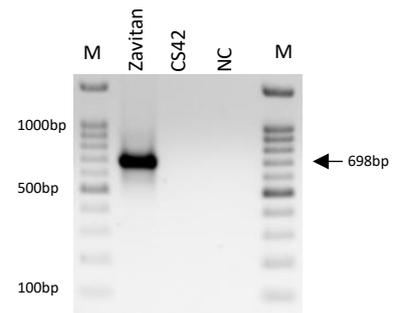
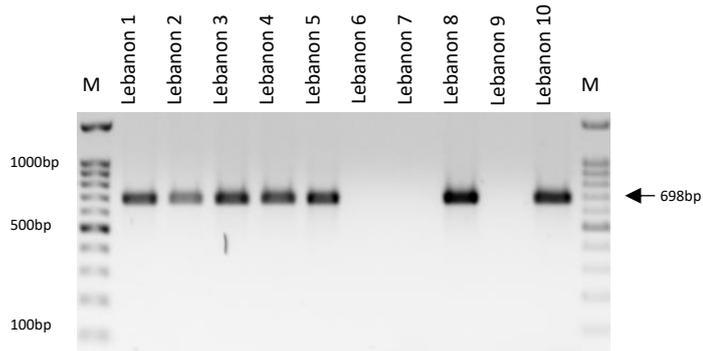
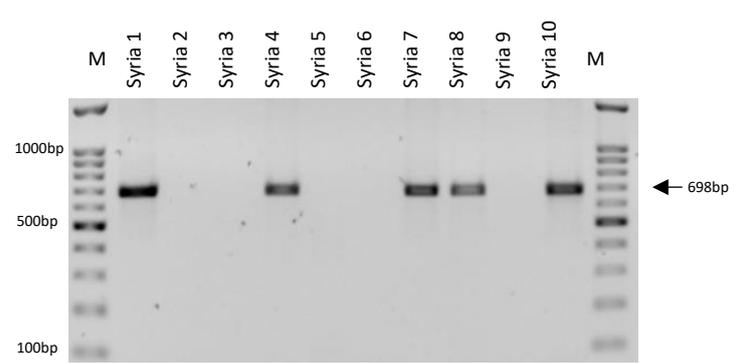
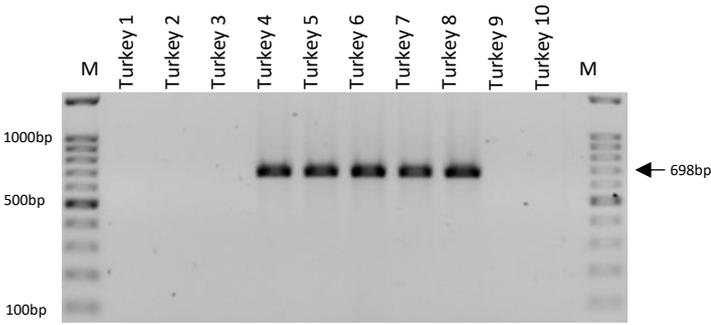
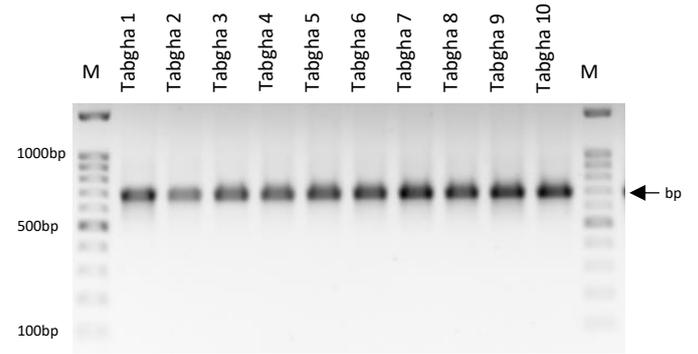
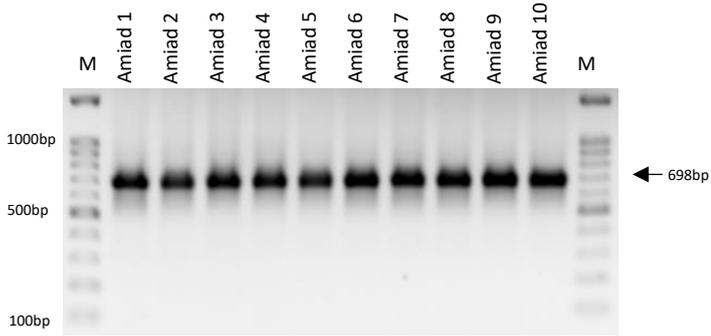
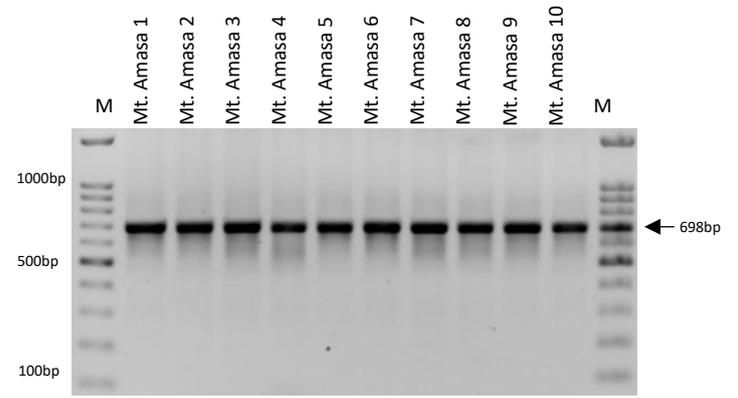
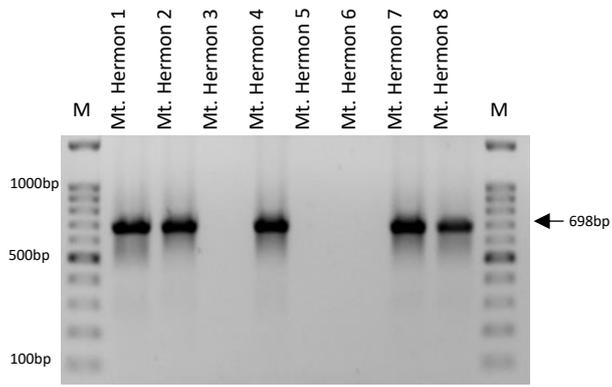
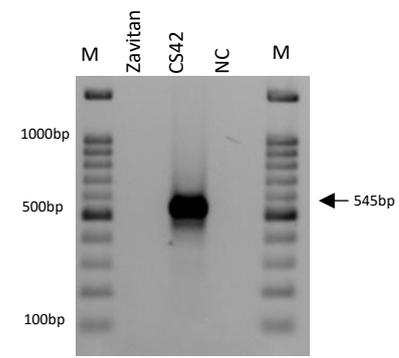
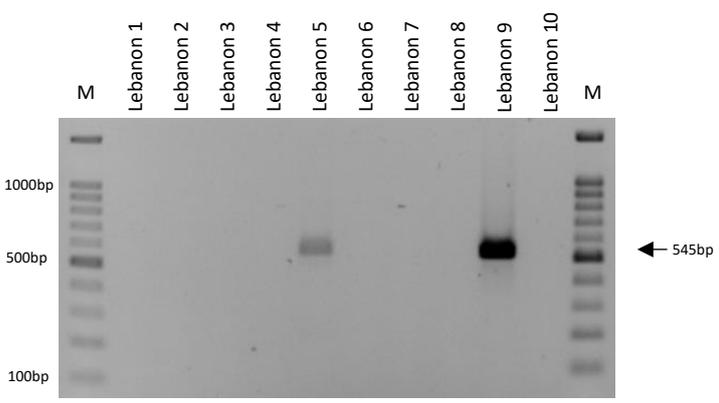
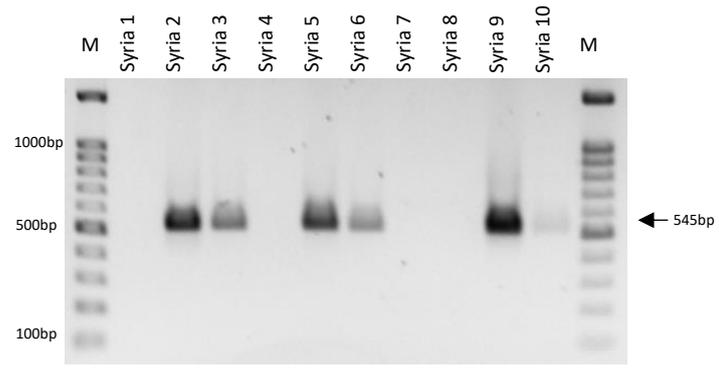
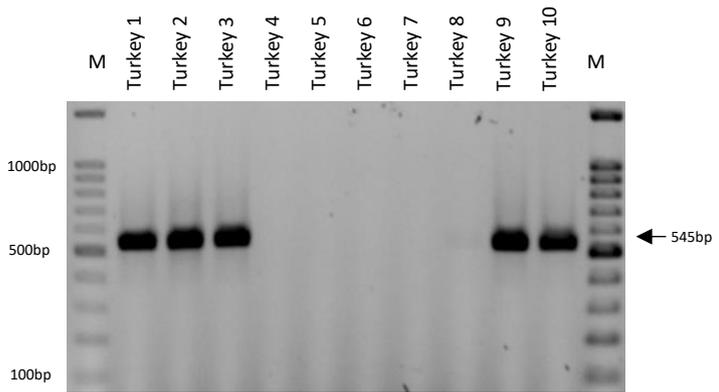
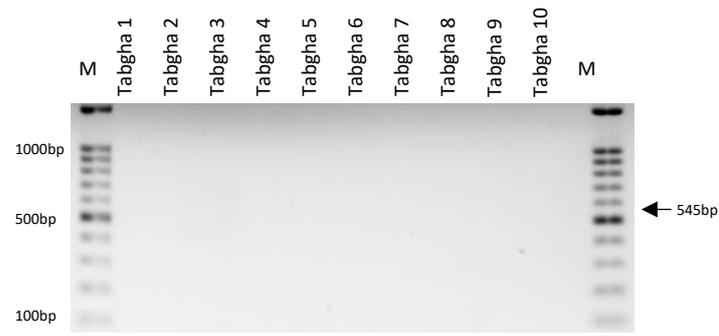
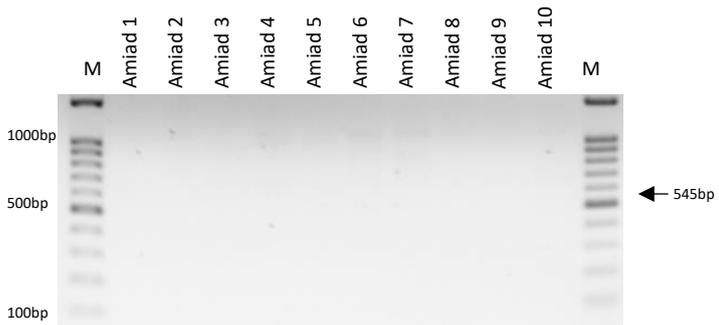
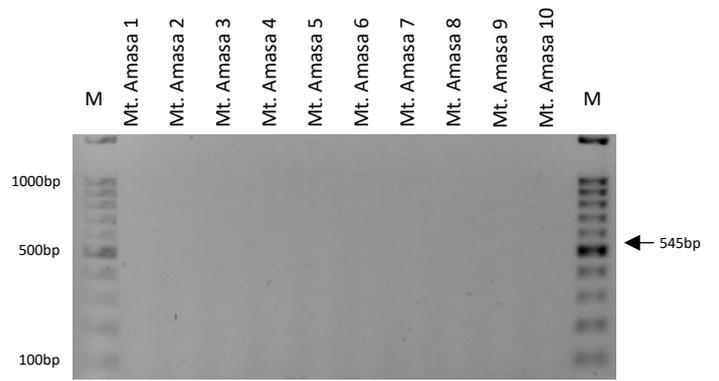
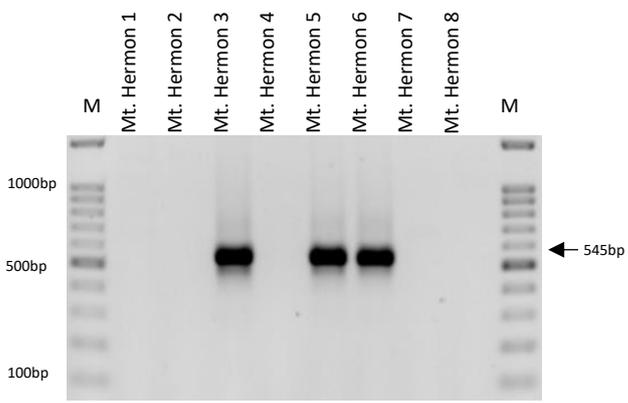


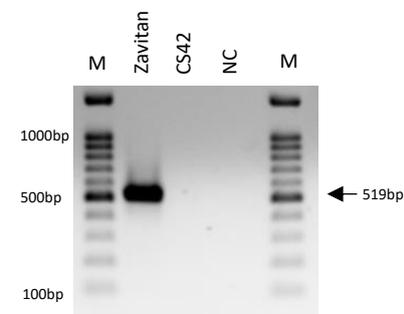
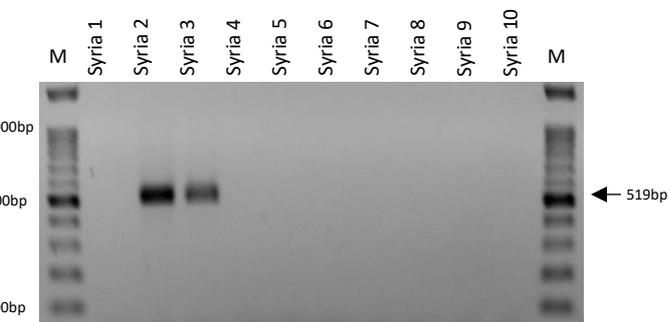
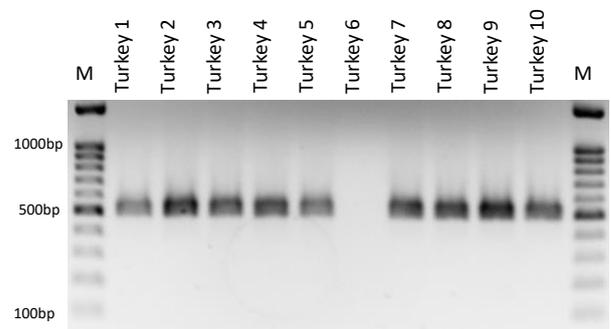
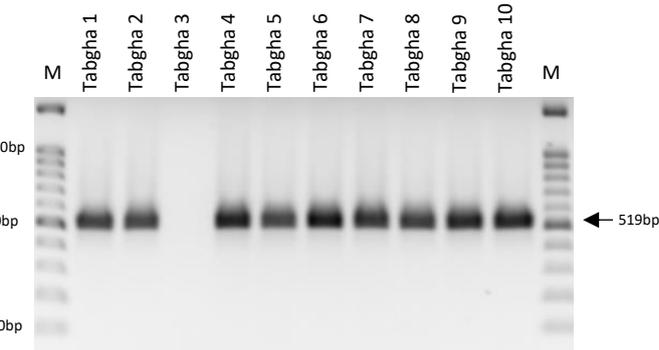
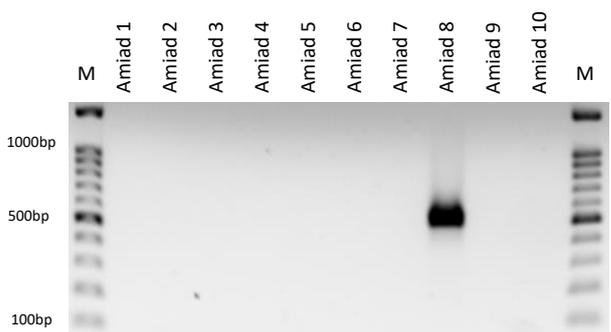
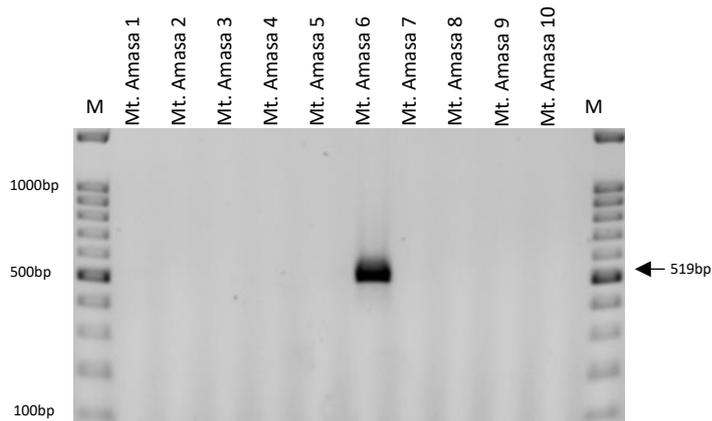
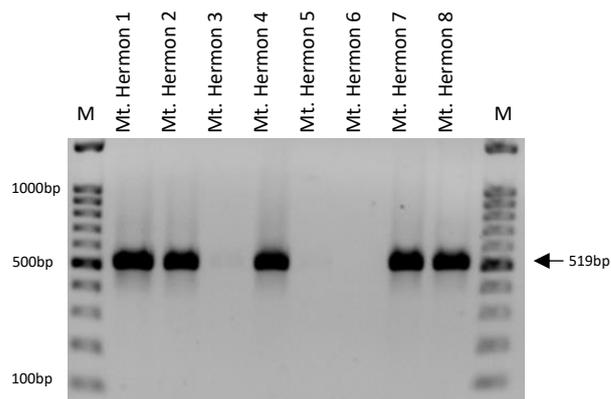
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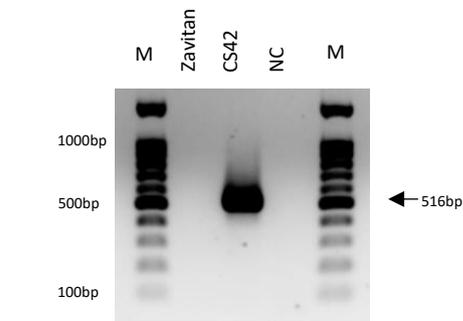
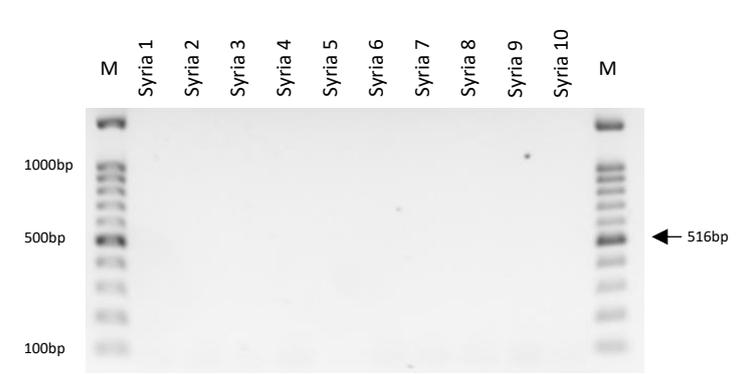
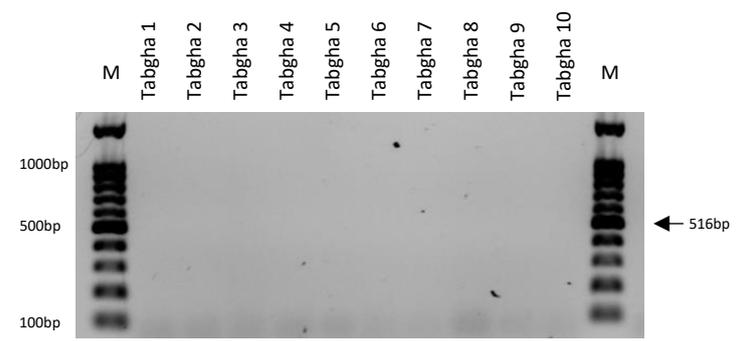
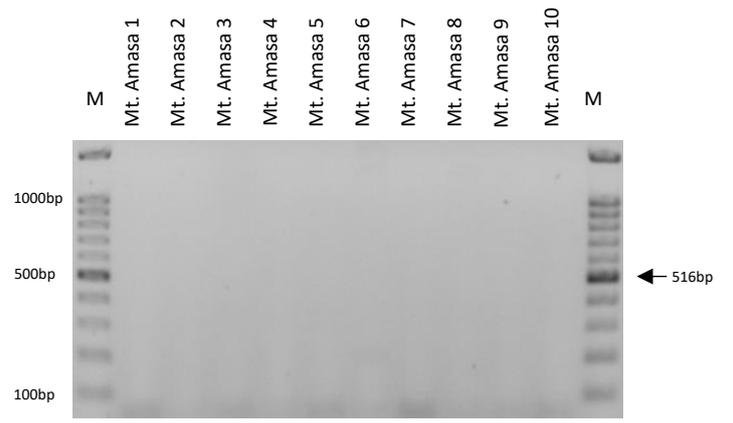
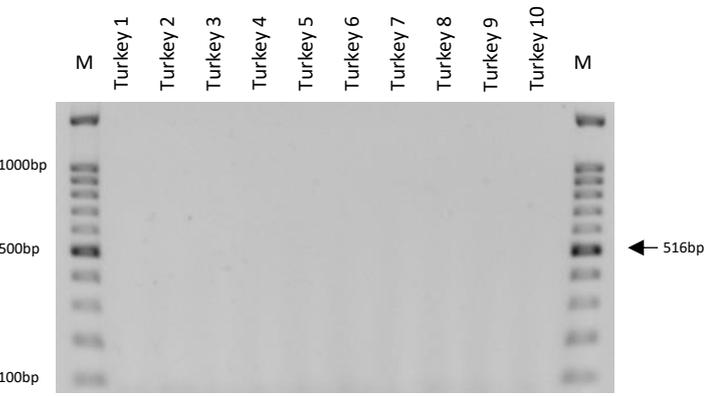
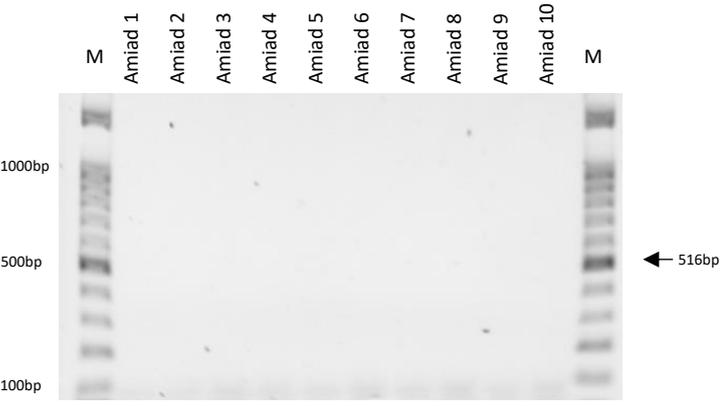
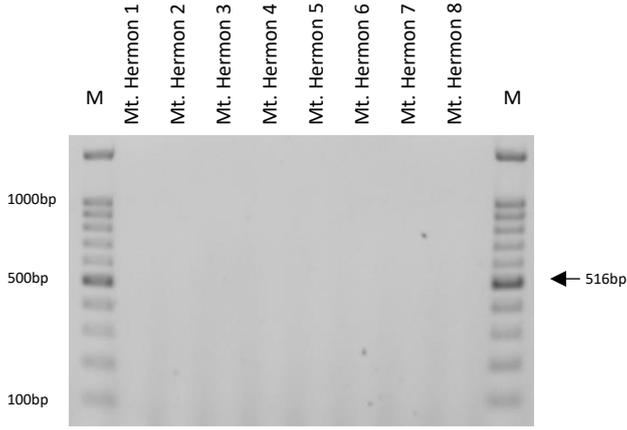
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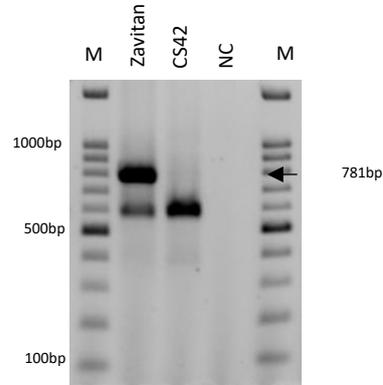
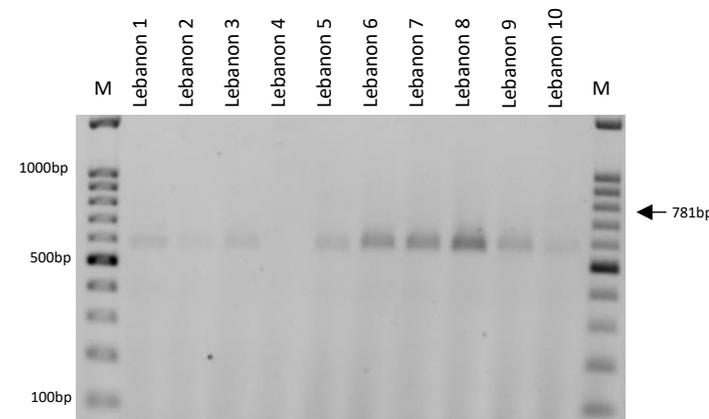
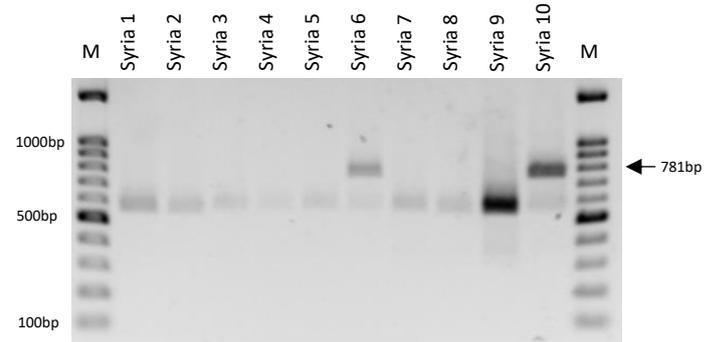
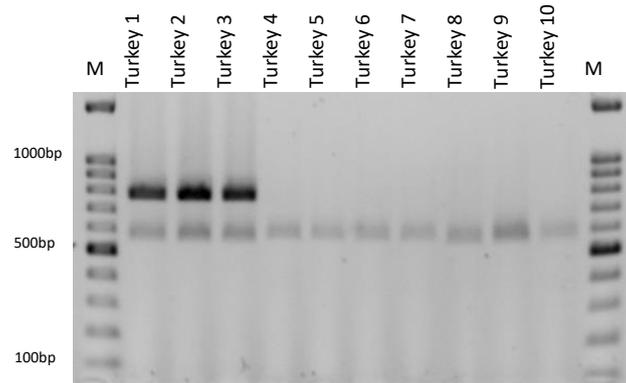
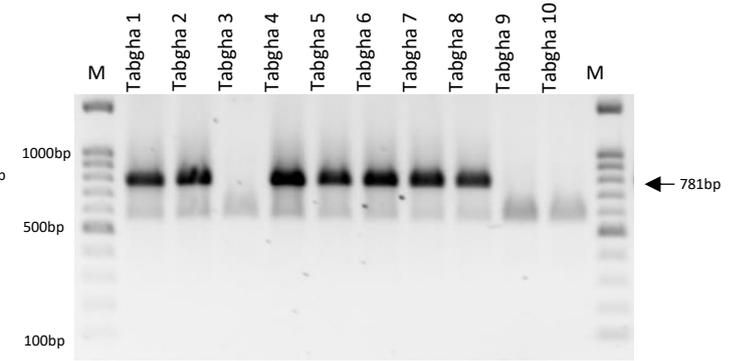
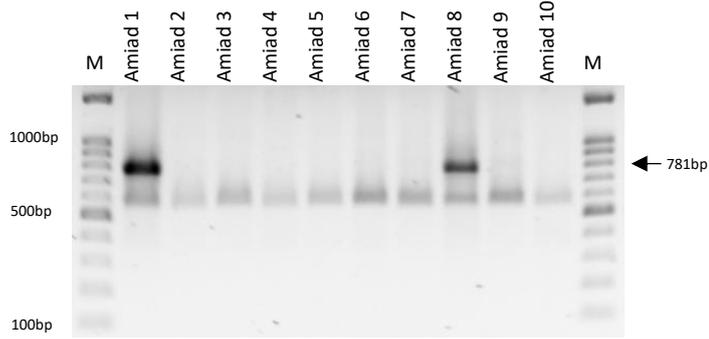
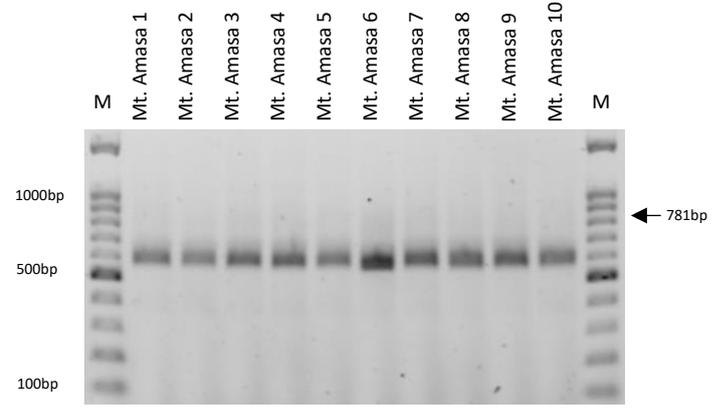
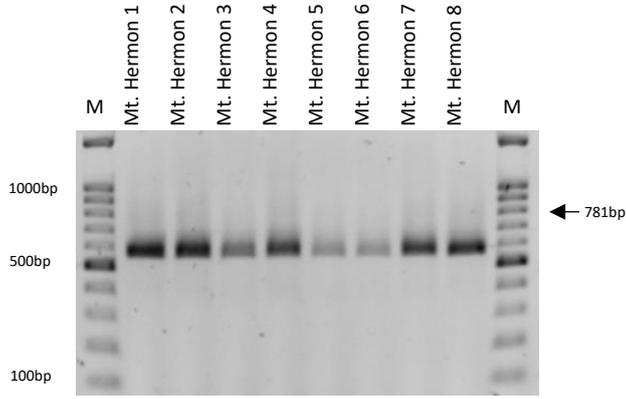
**b.1**



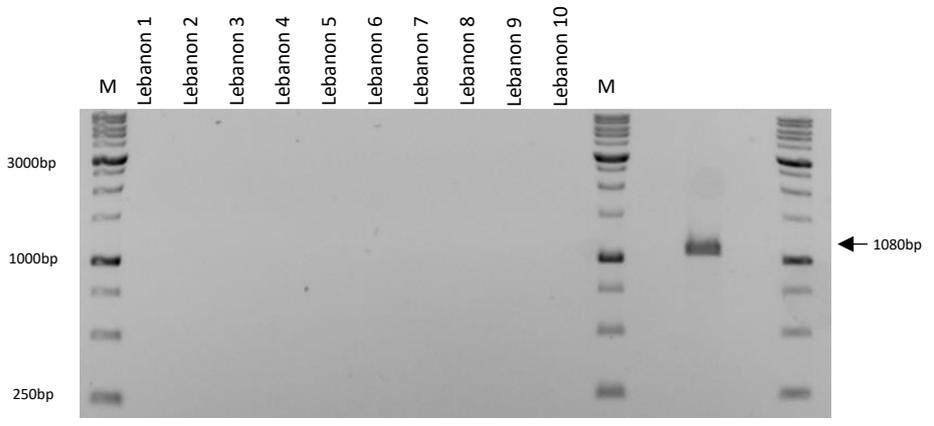
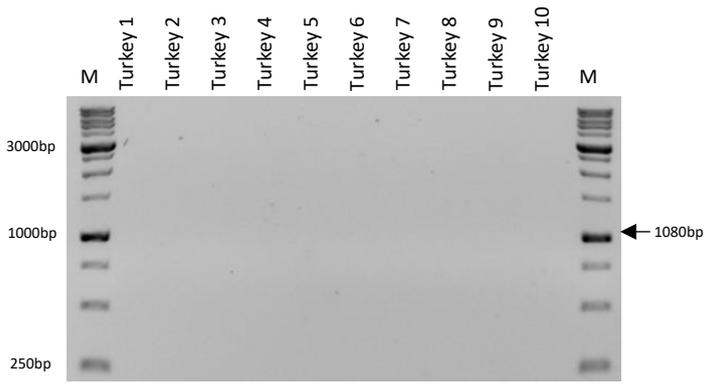
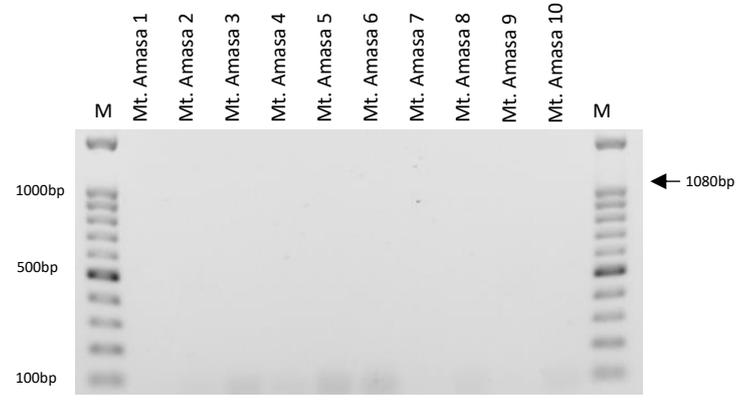
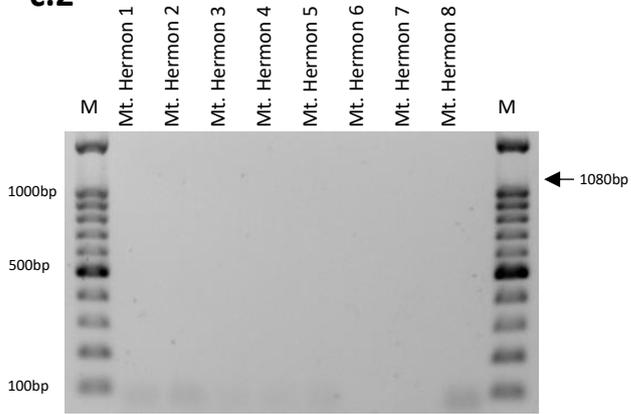
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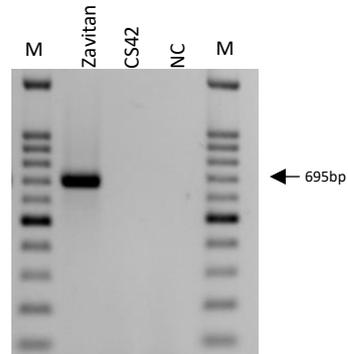
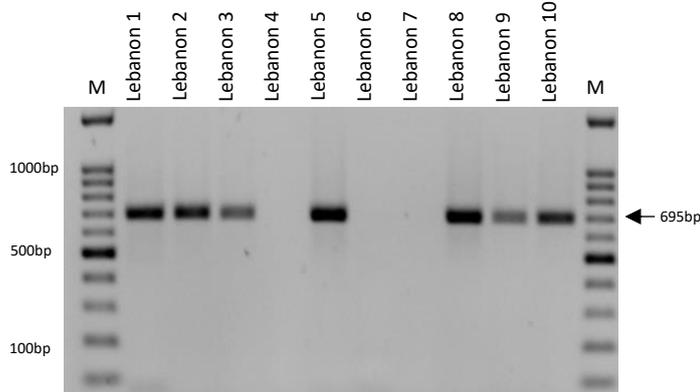
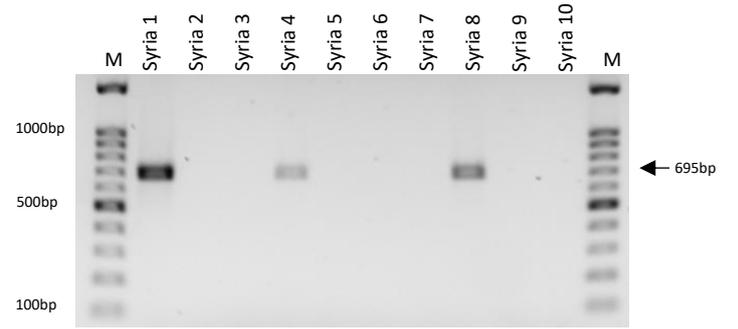
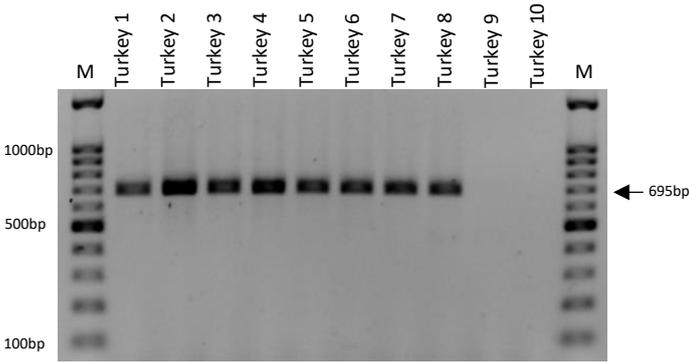
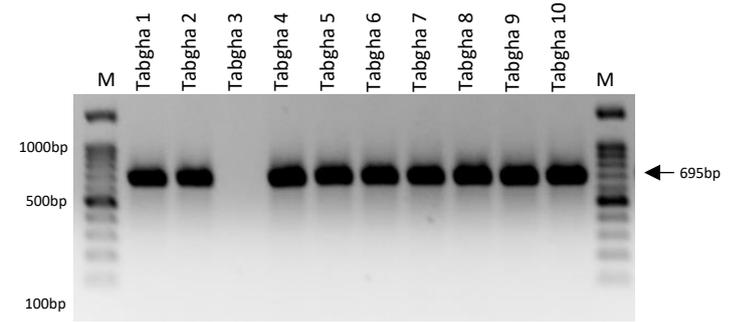
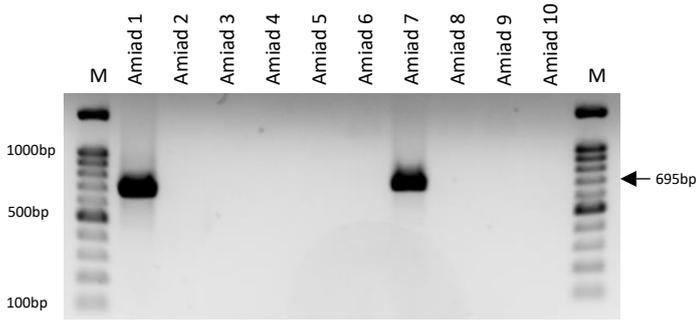
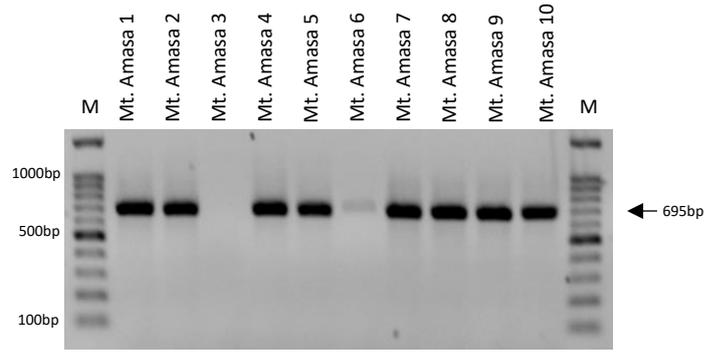
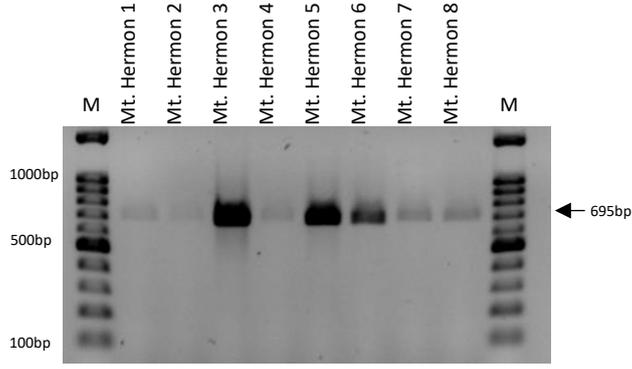
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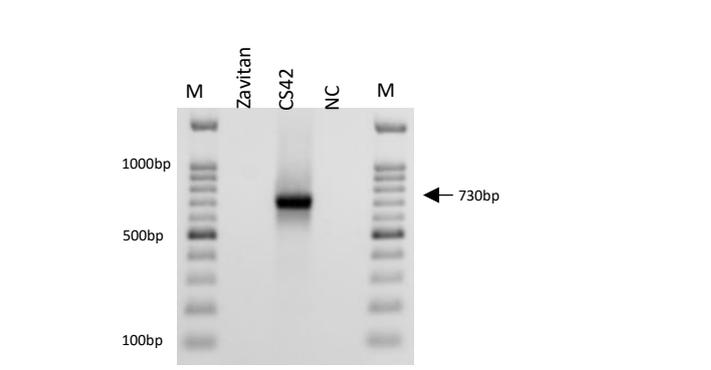
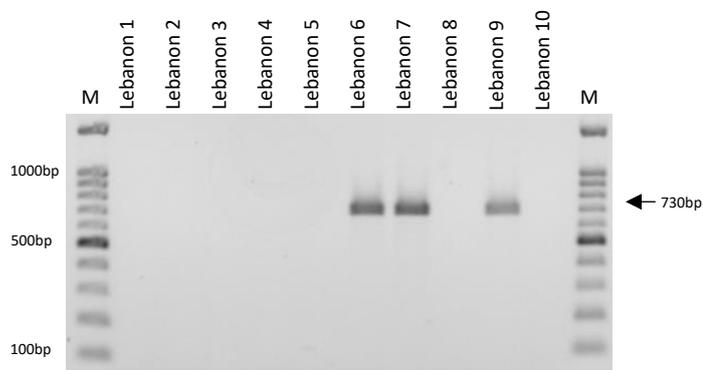
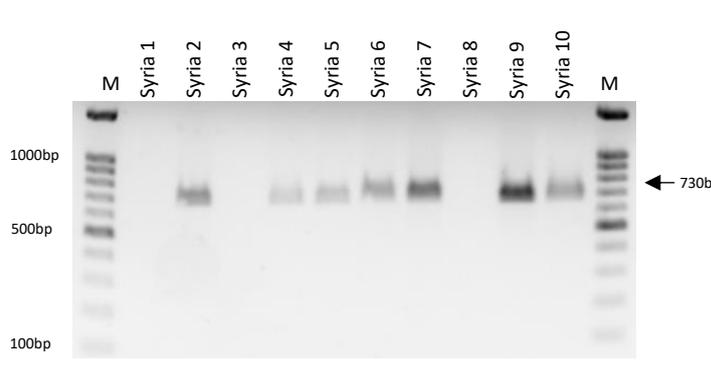
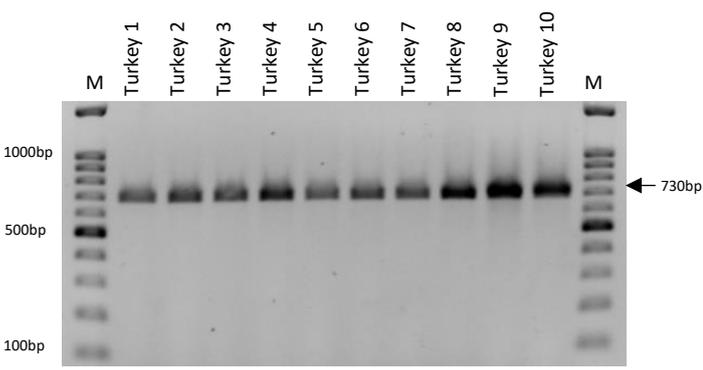
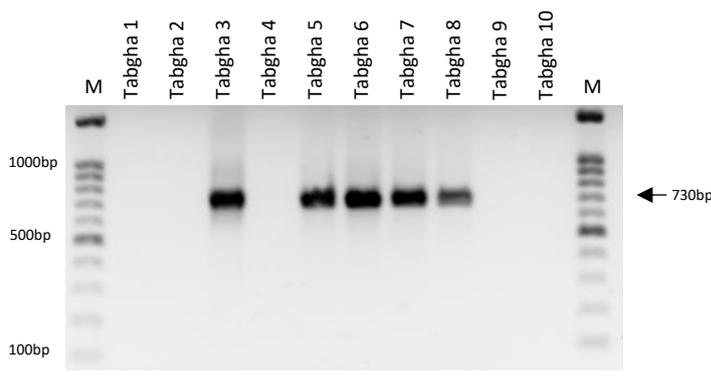
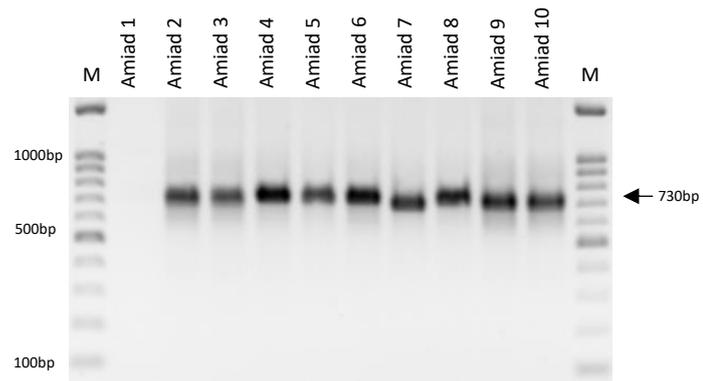
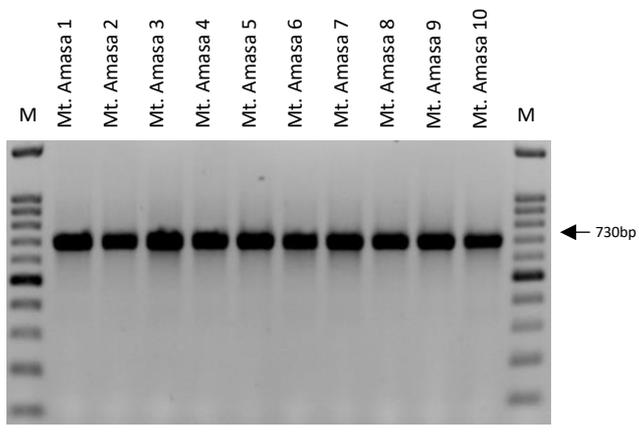
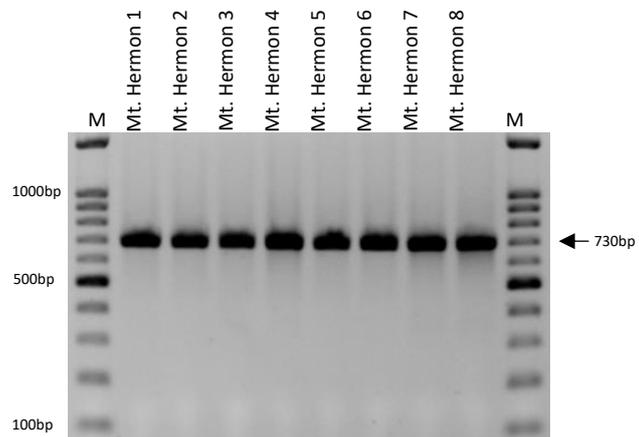
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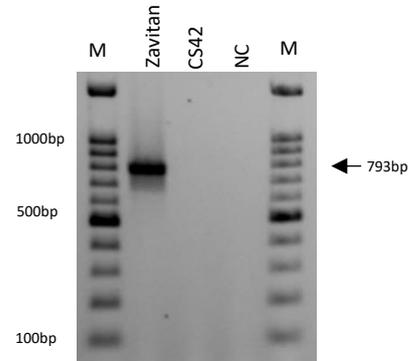
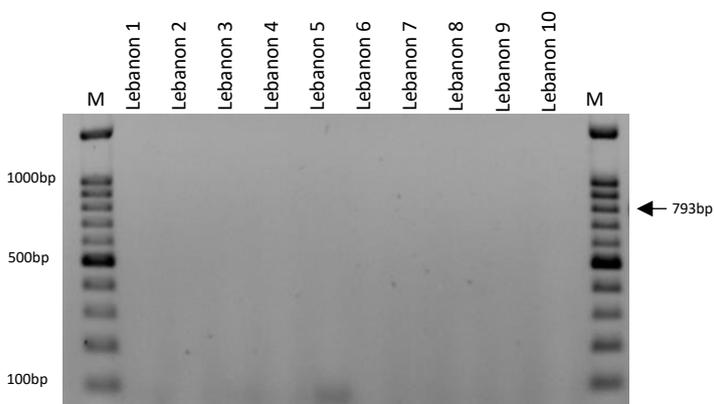
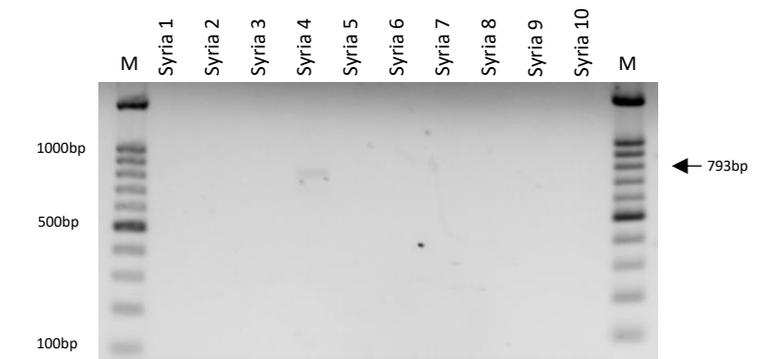
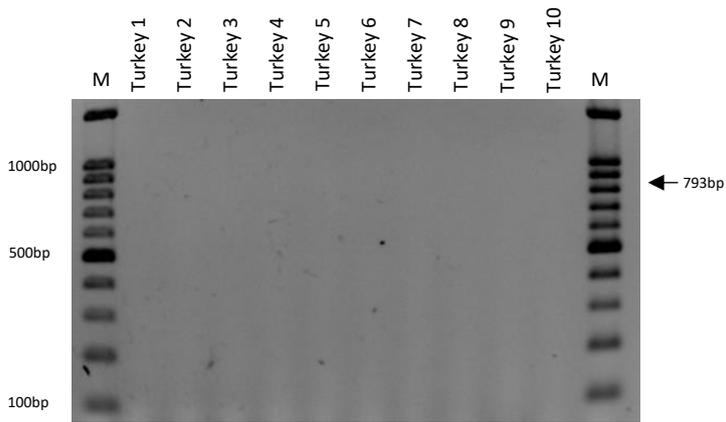
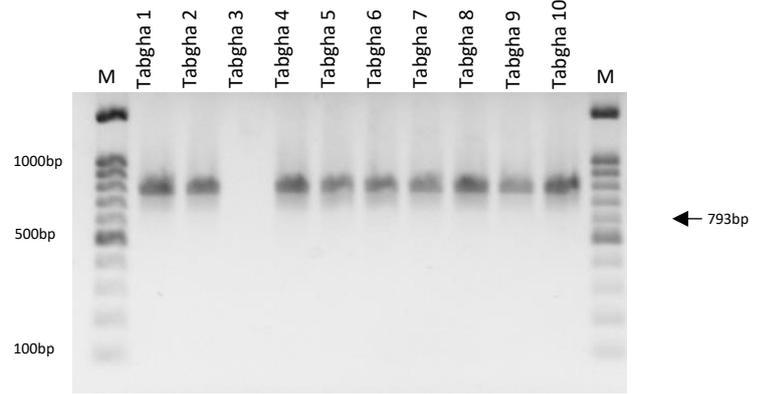
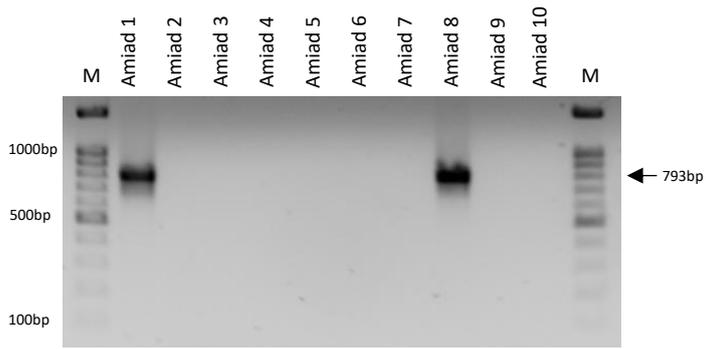
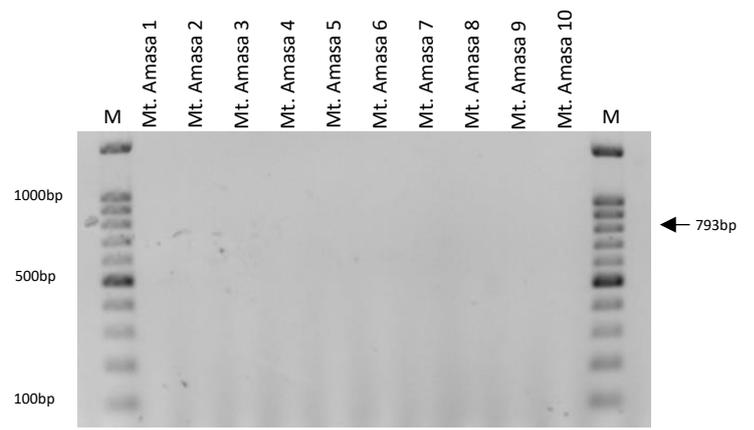
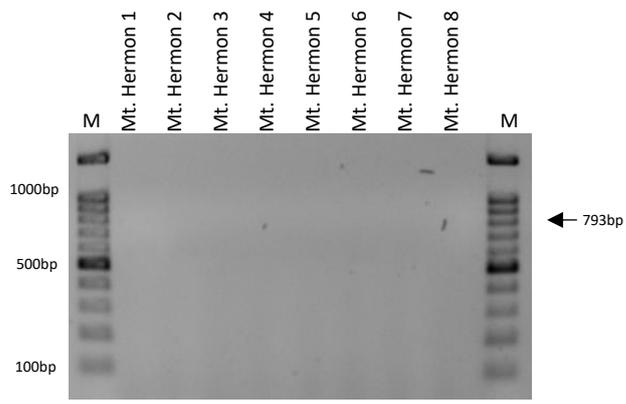
**d.1**



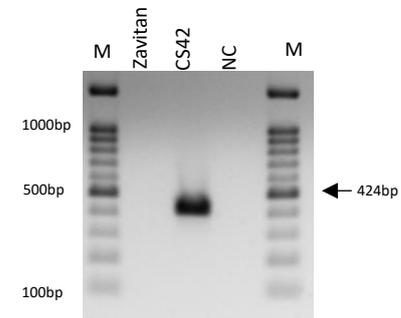
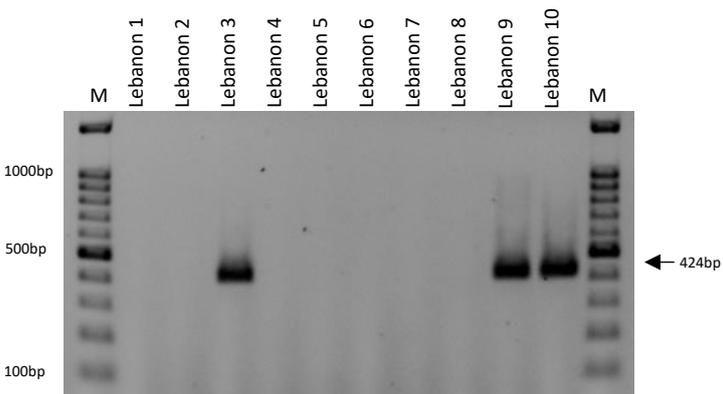
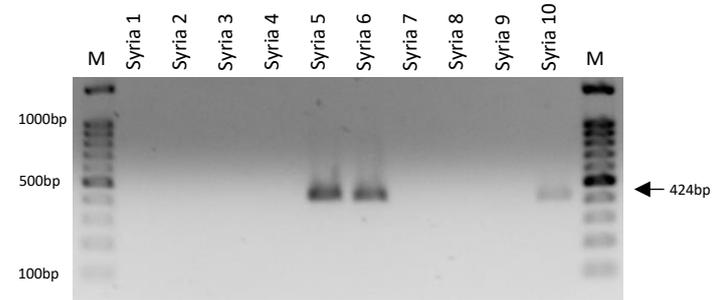
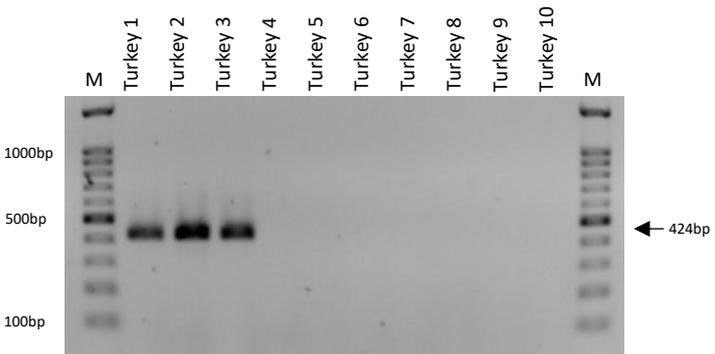
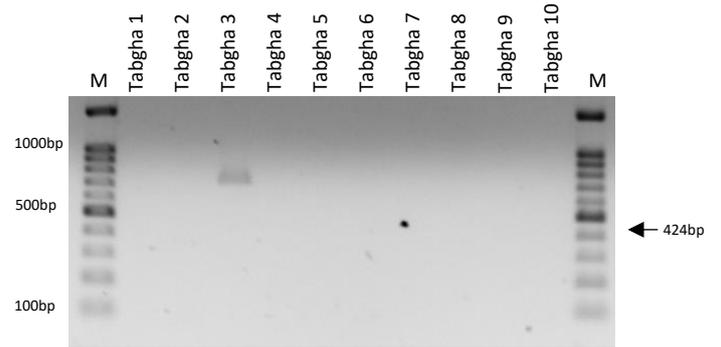
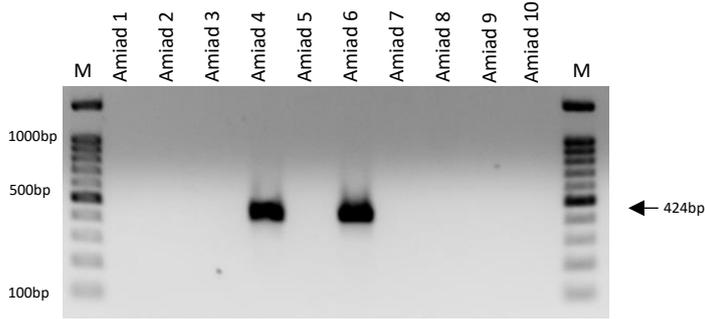
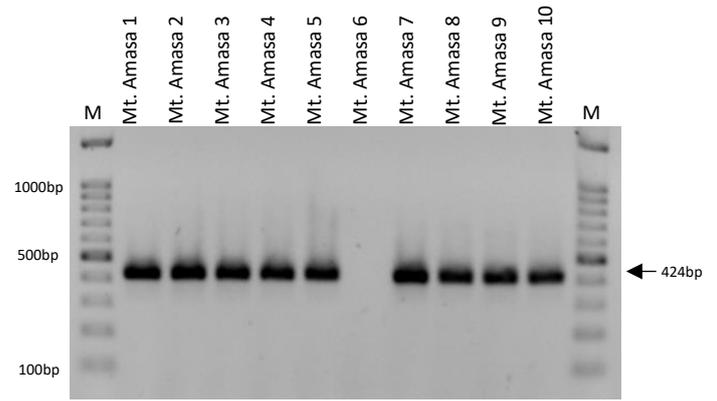
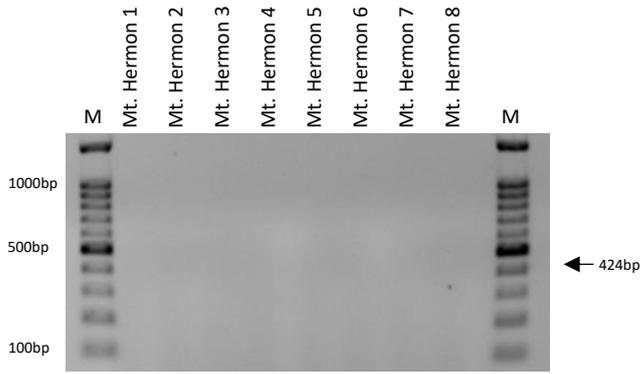
d.2



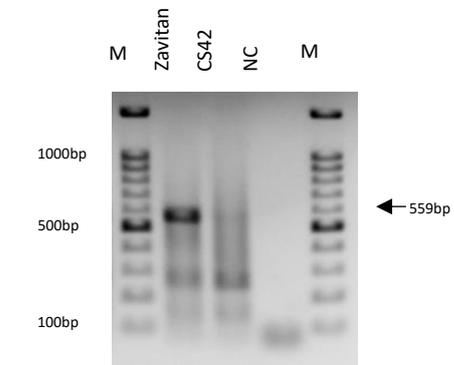
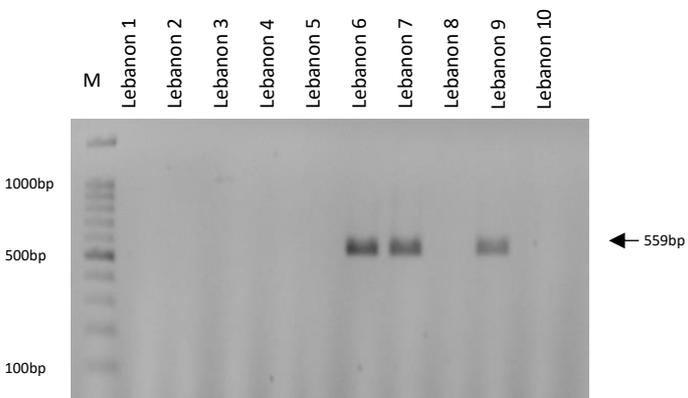
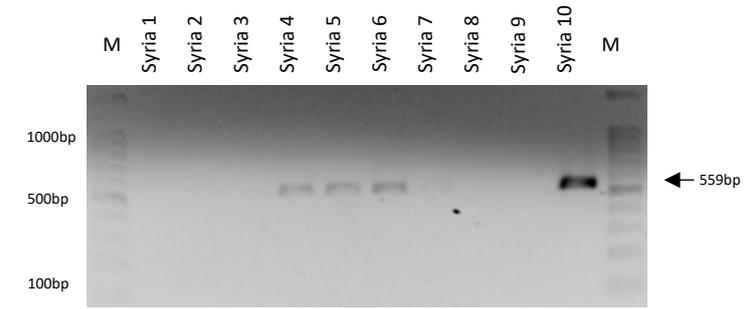
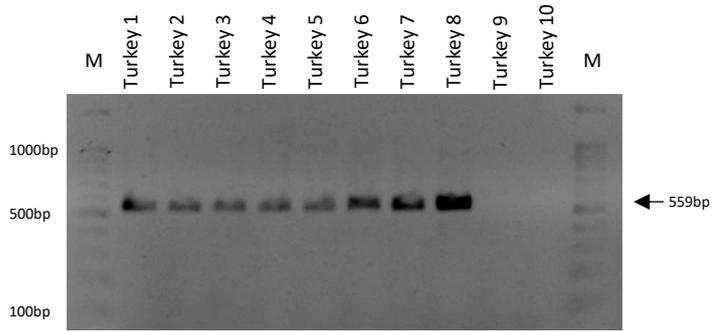
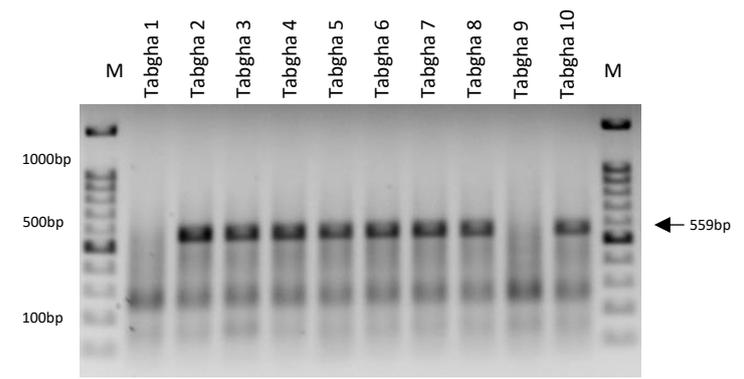
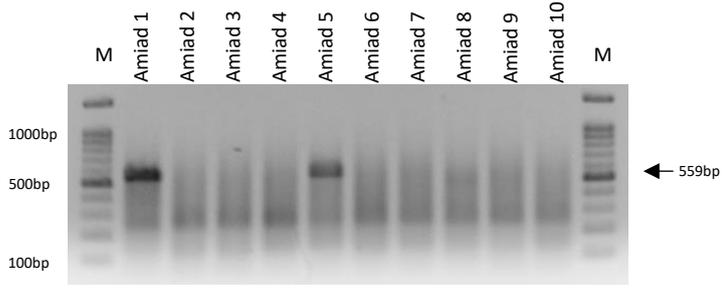
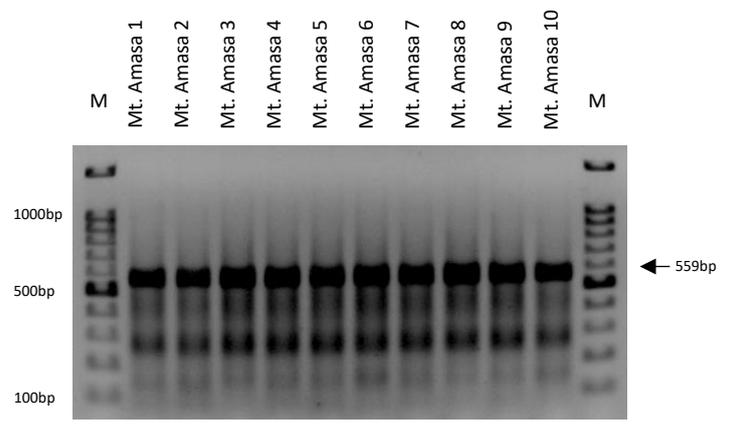
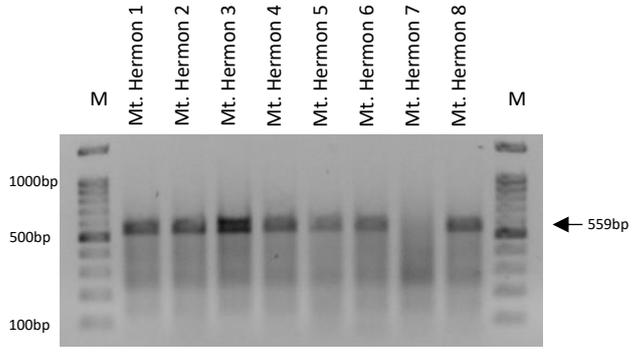
**e.1**



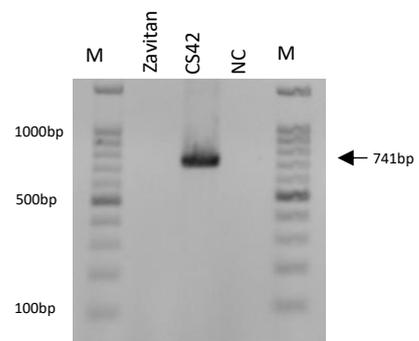
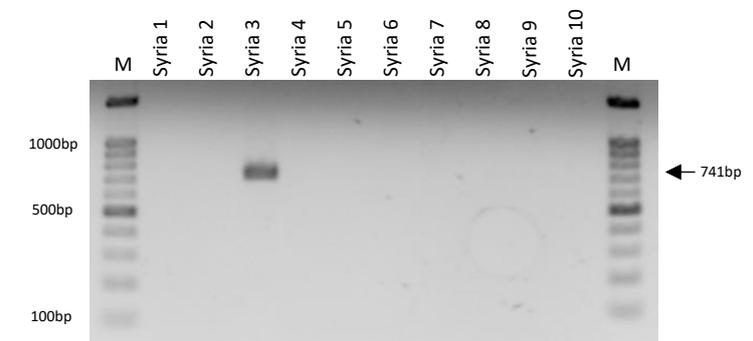
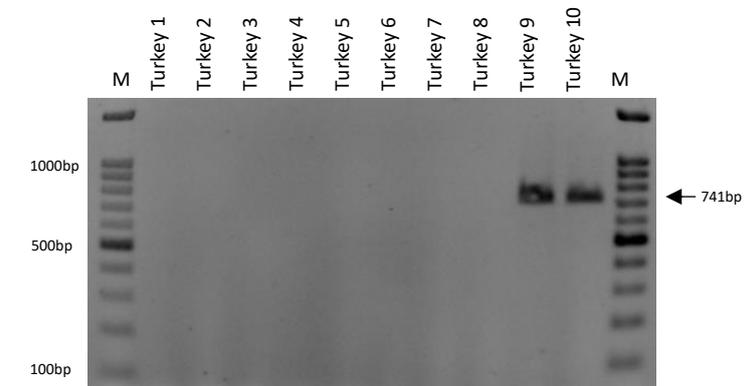
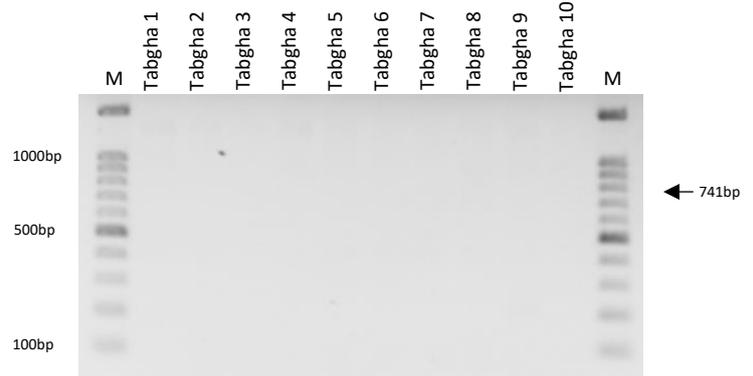
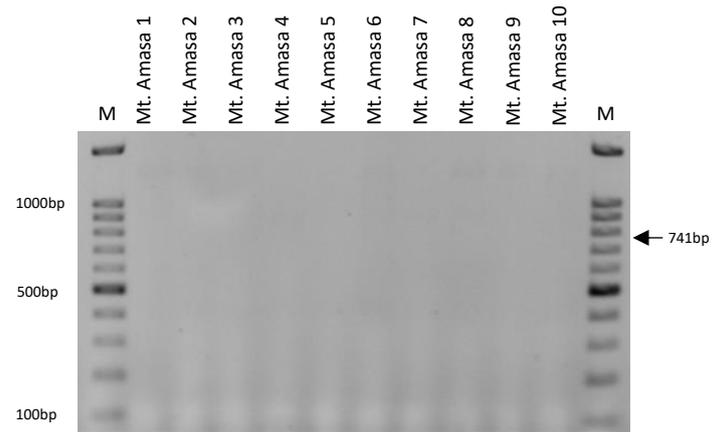
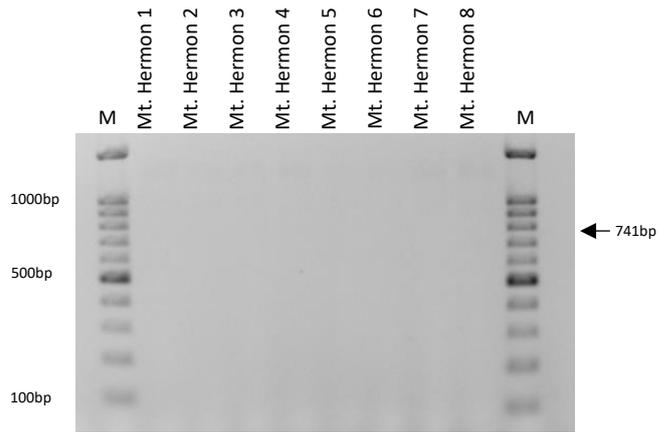
e.2



f.1



f.2



g.1

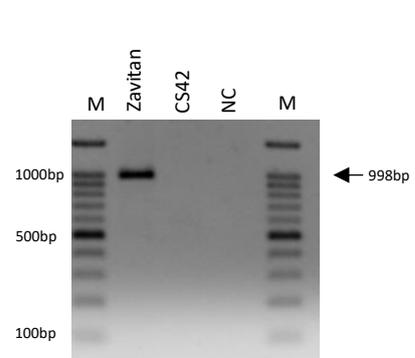
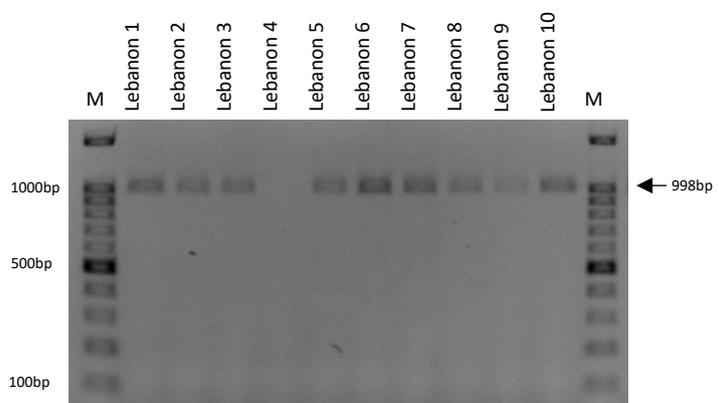
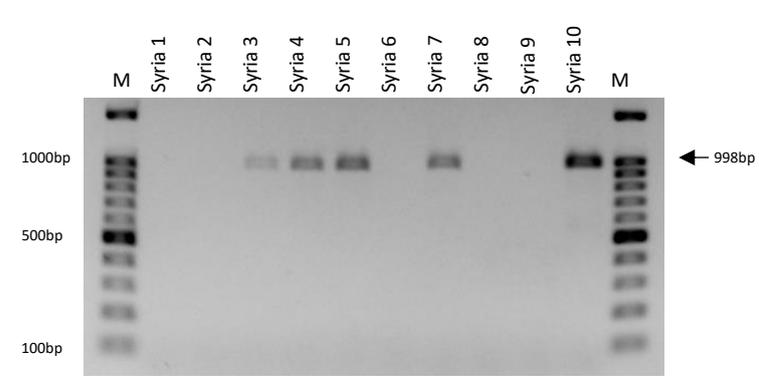
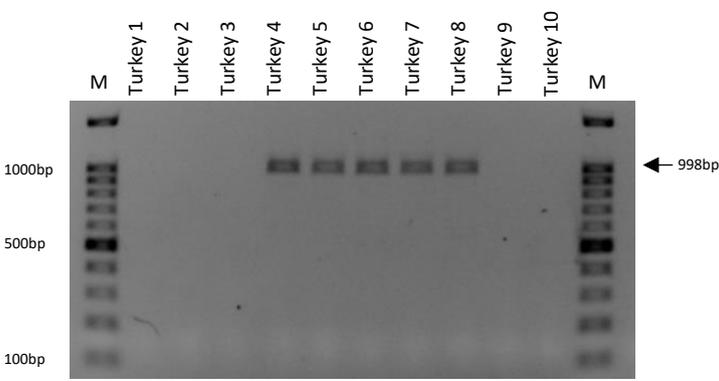
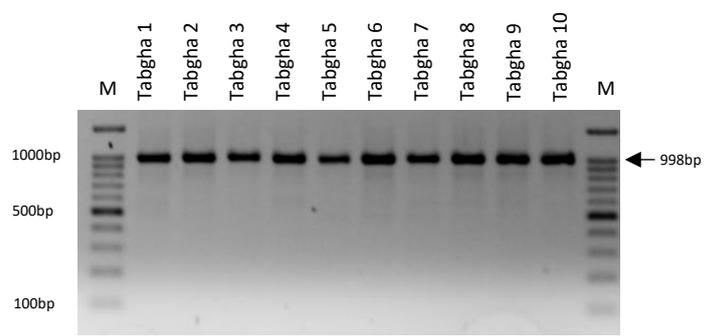
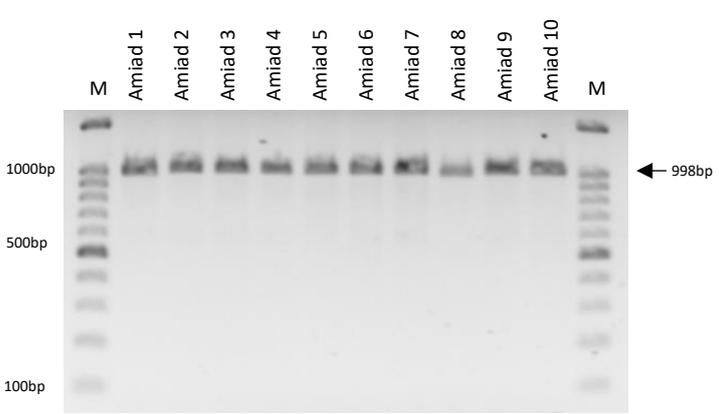
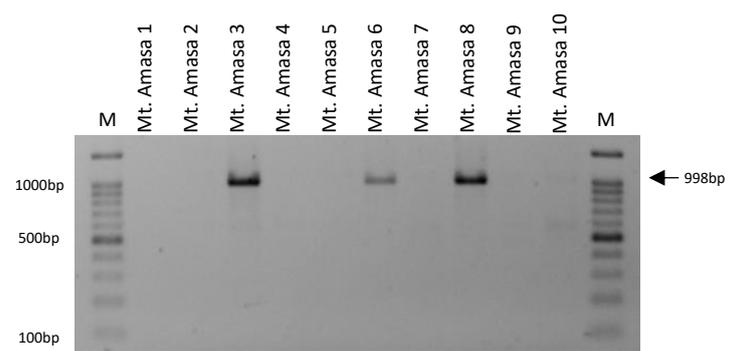
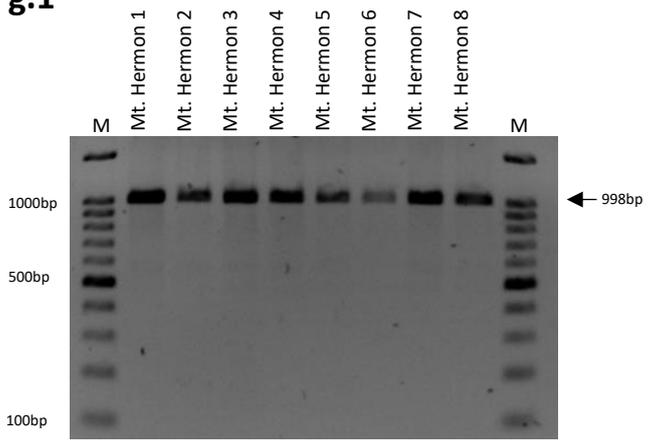
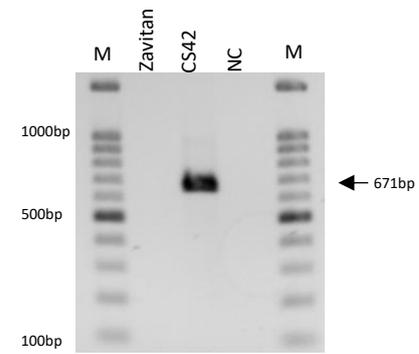
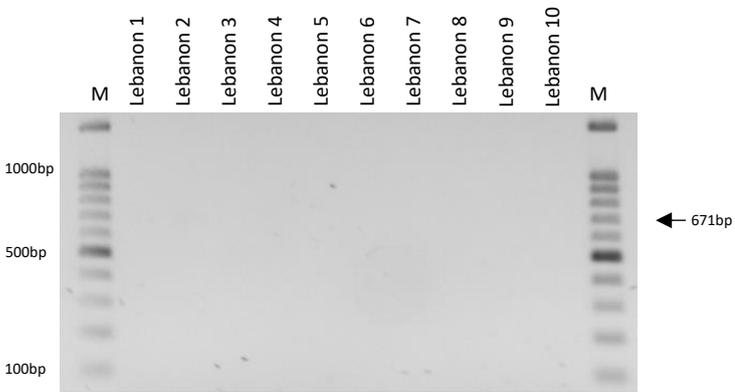
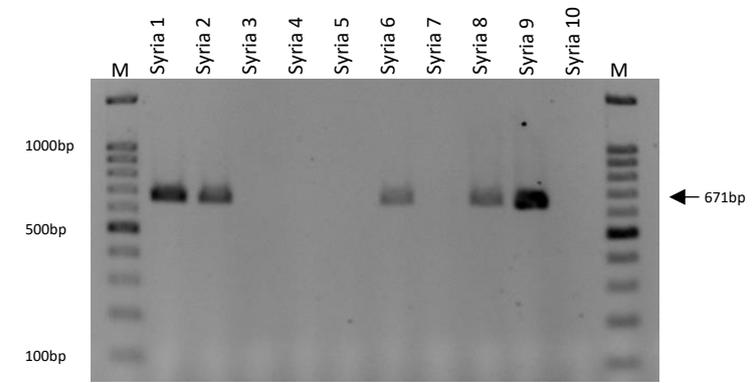
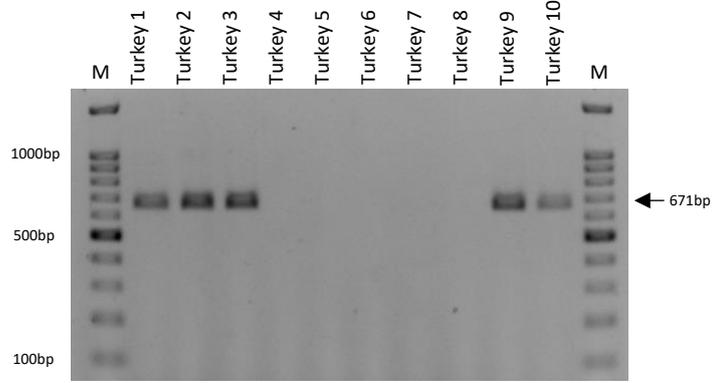
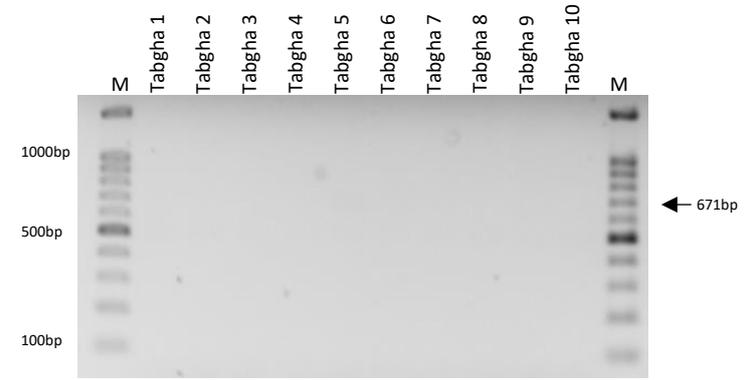
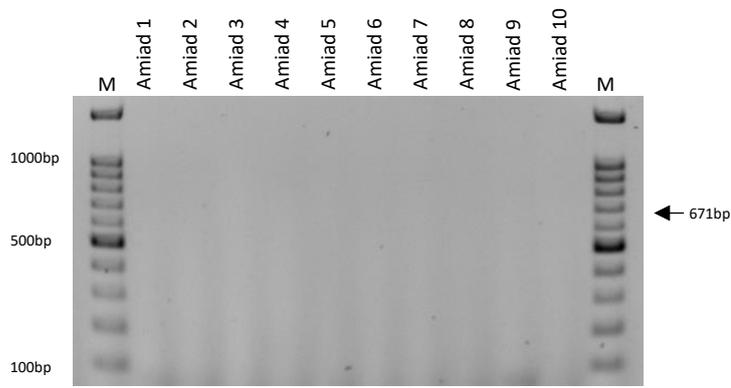
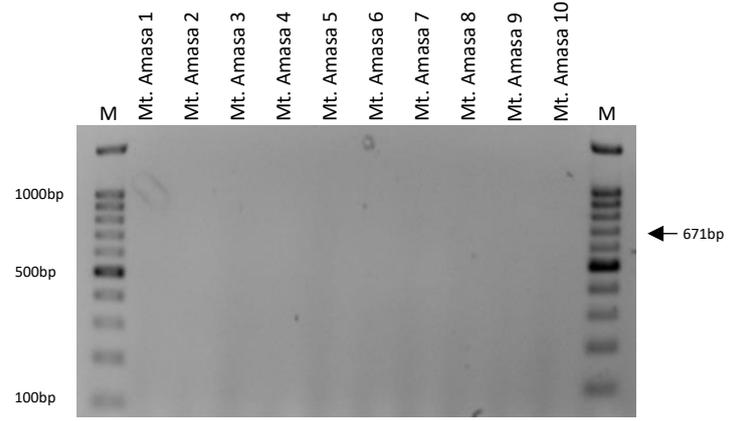
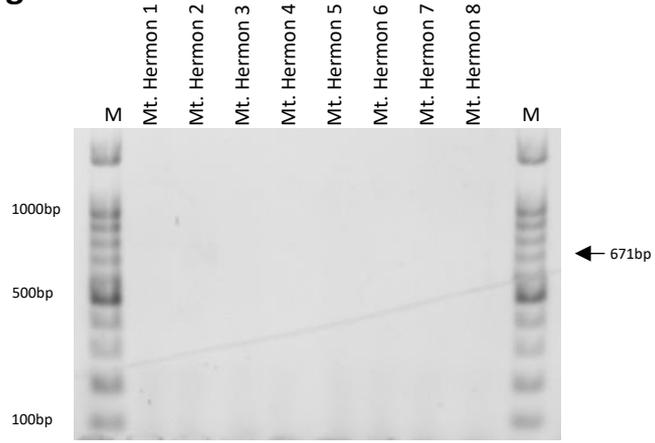
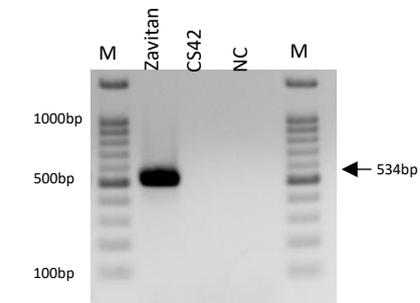
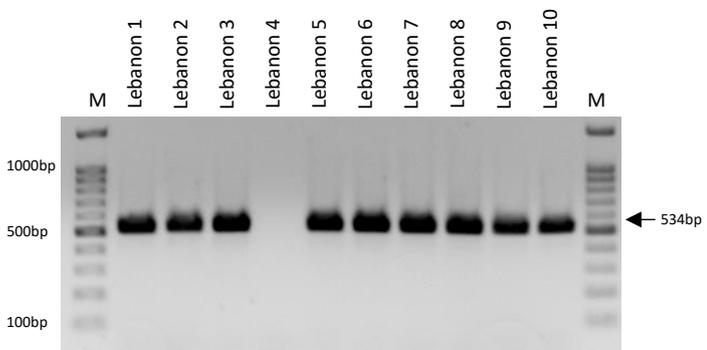
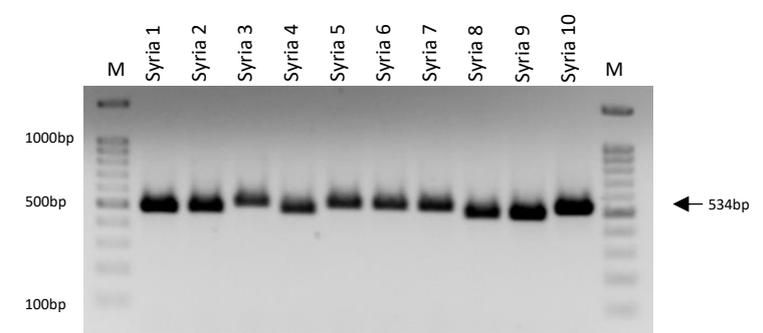
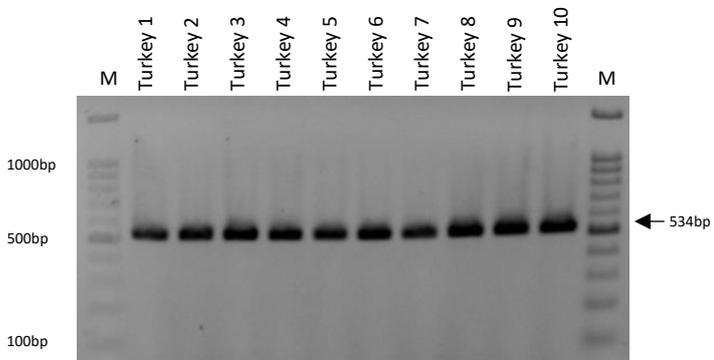
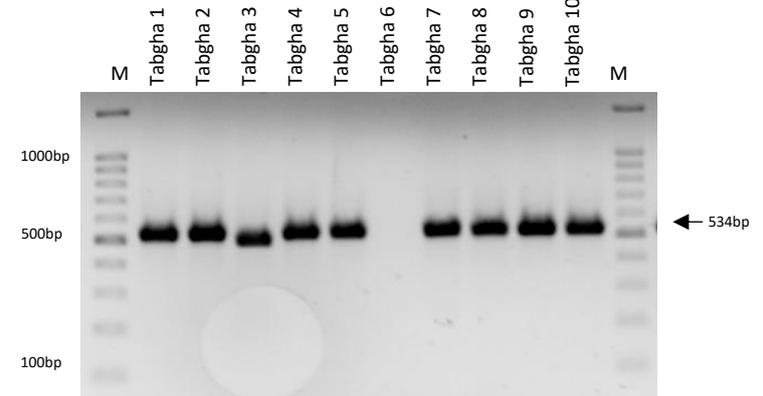
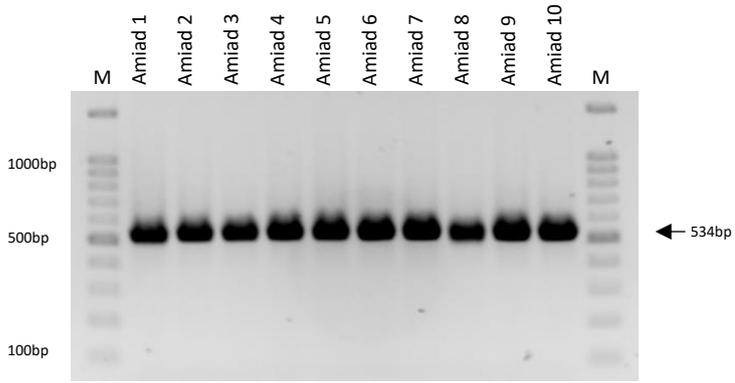
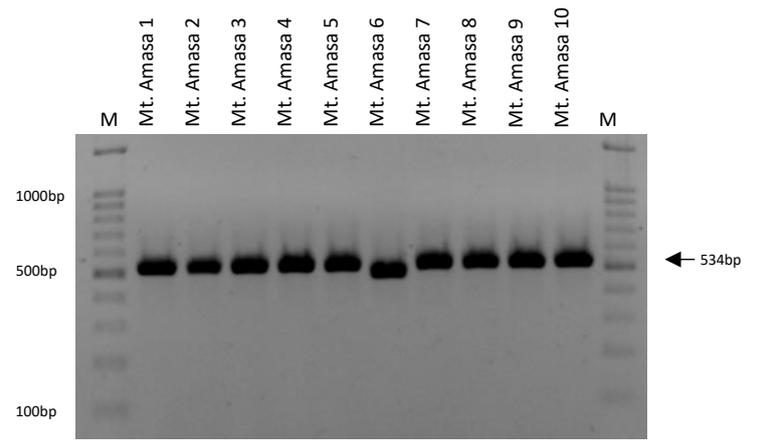
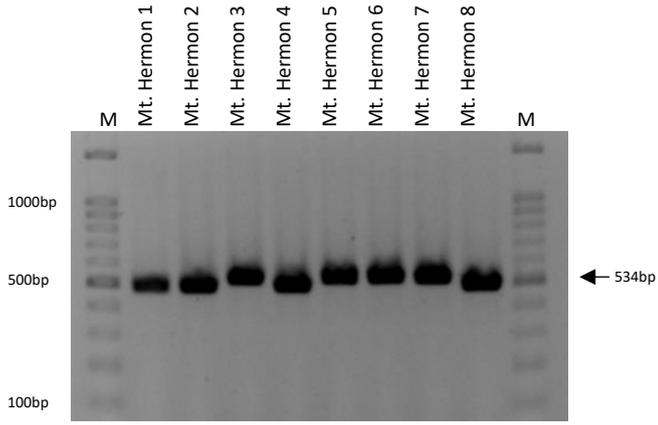


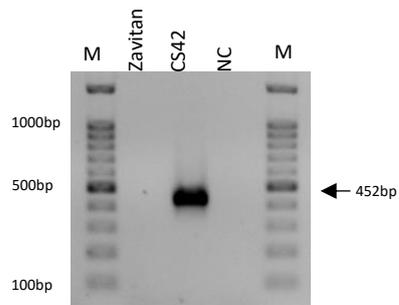
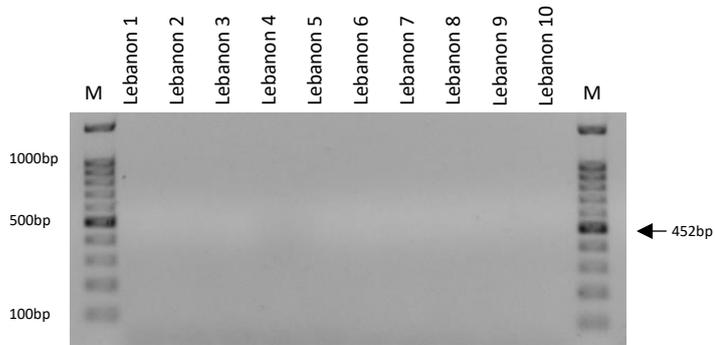
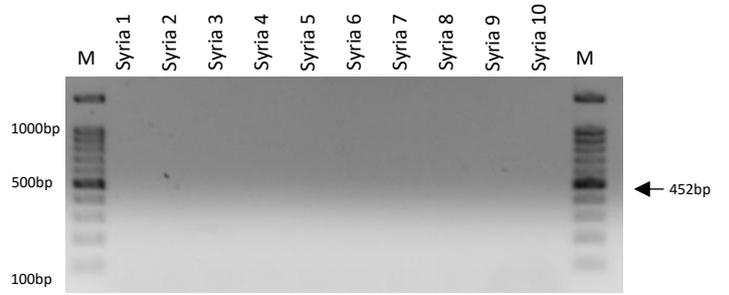
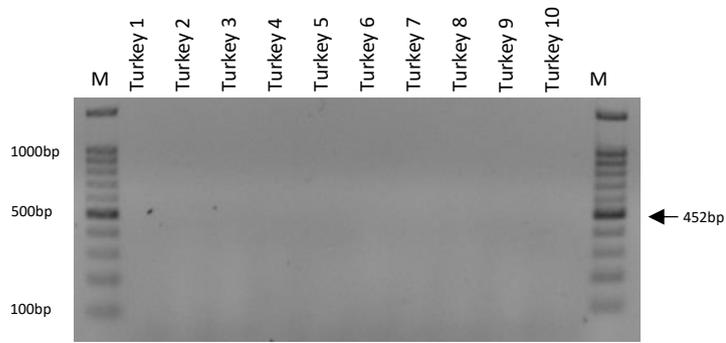
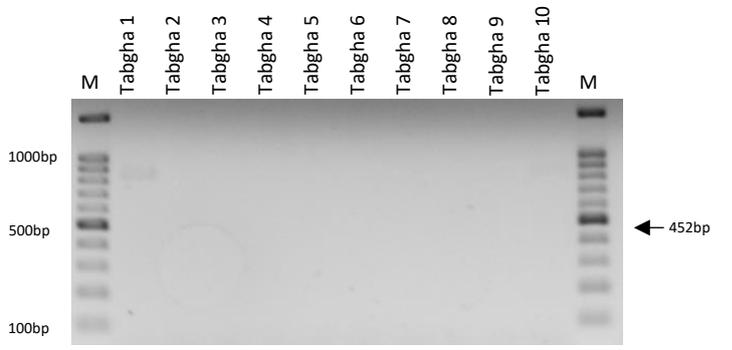
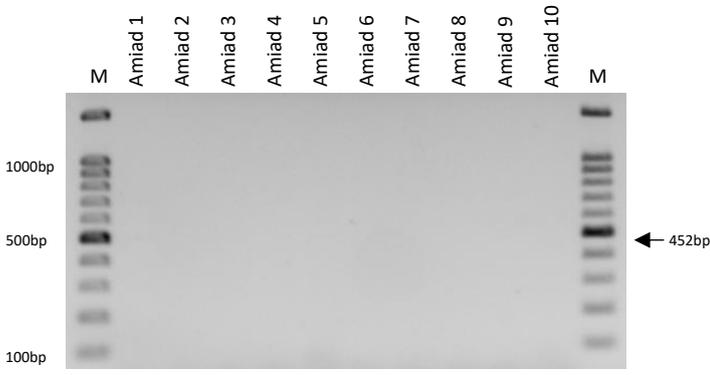
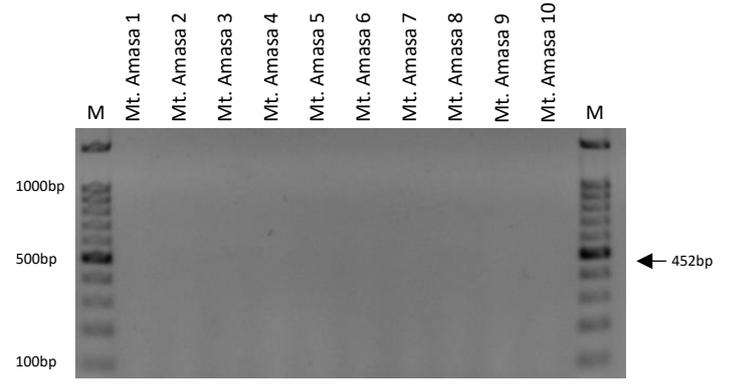
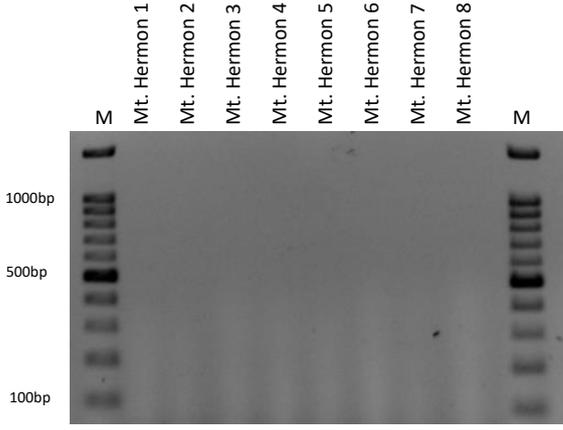
Fig. 2



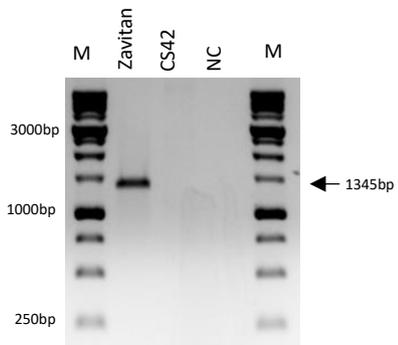
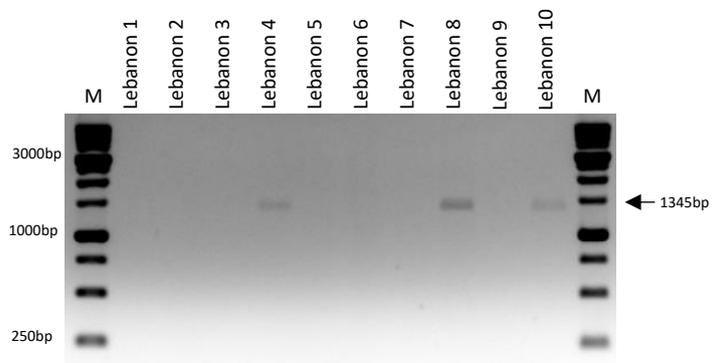
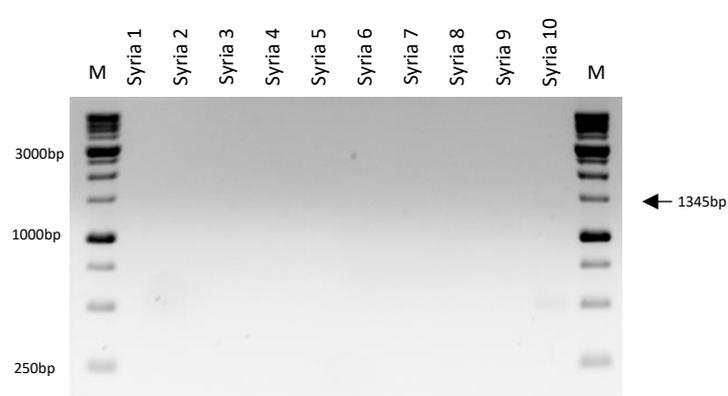
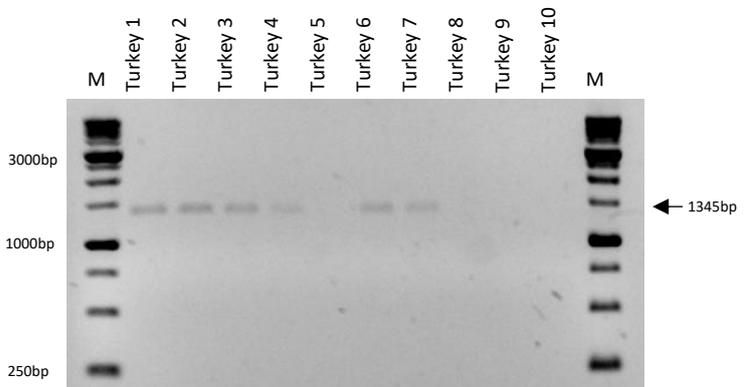
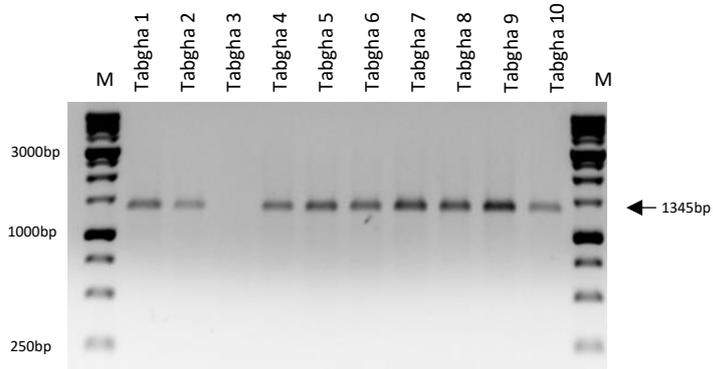
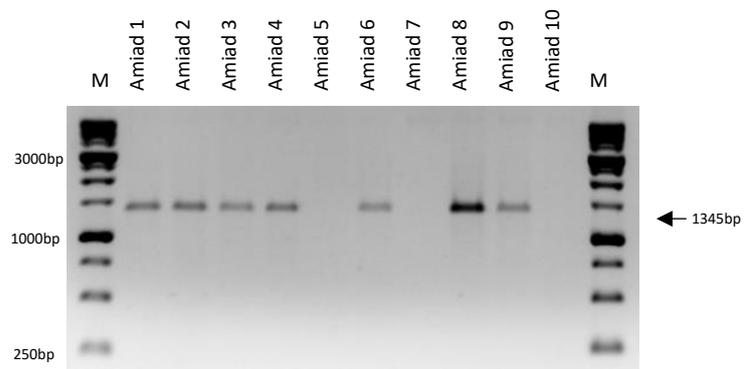
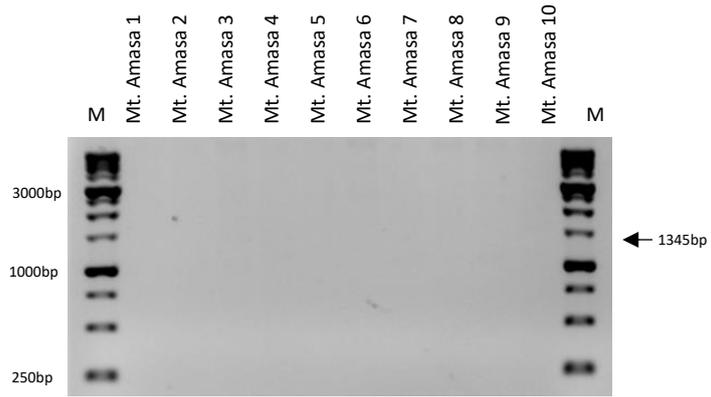
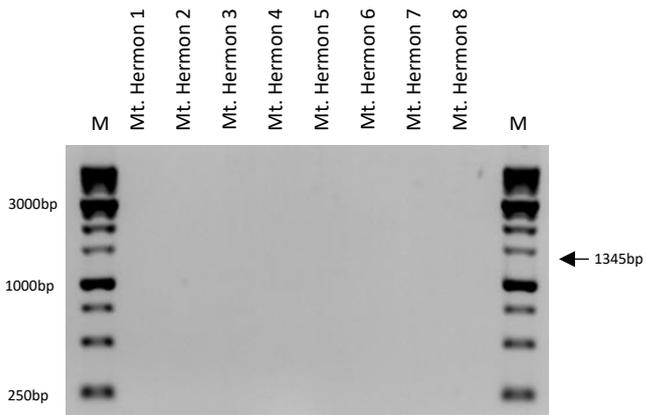
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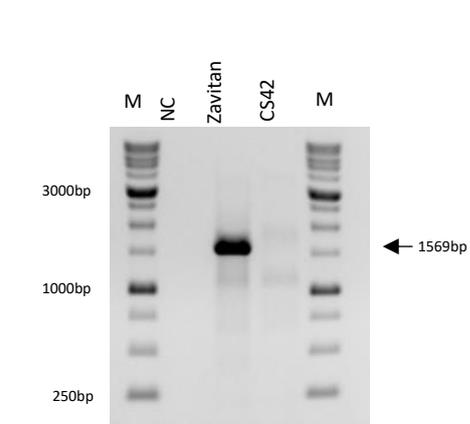
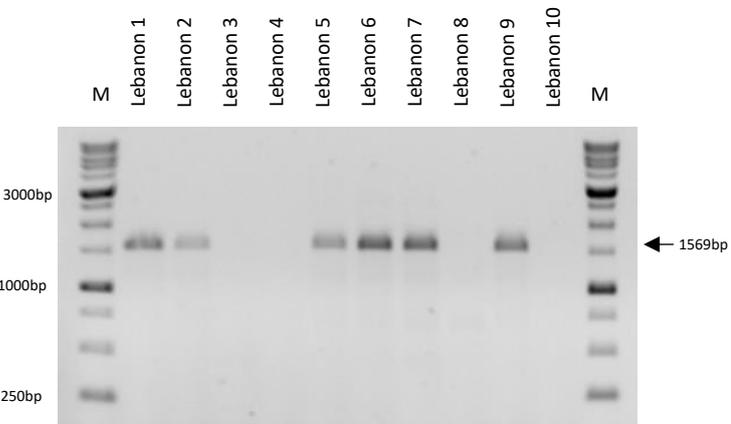
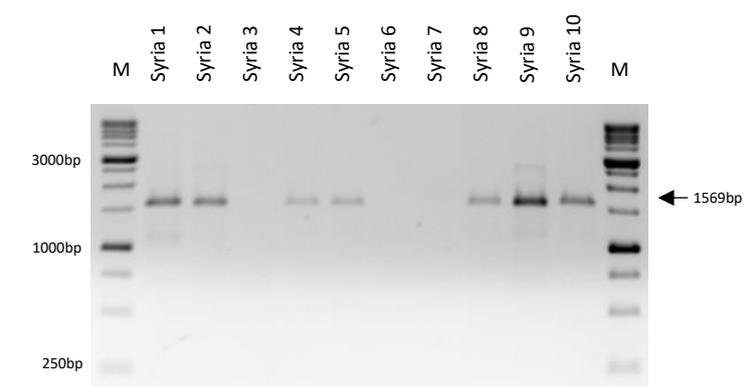
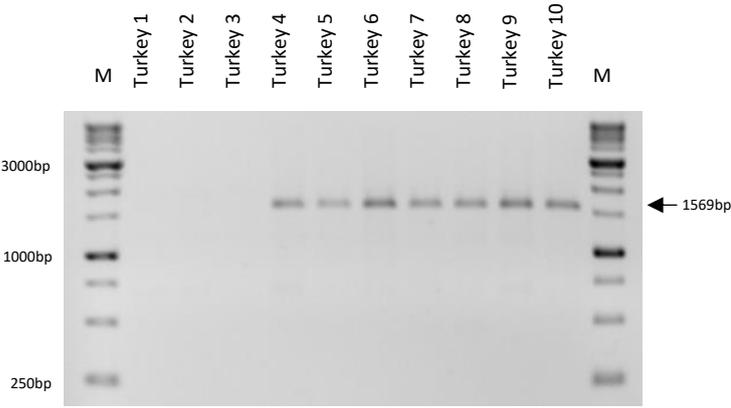
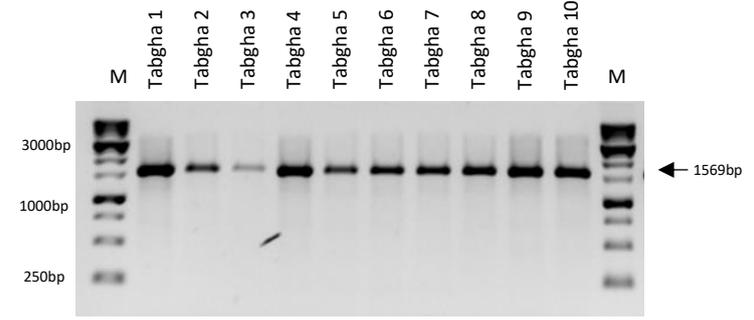
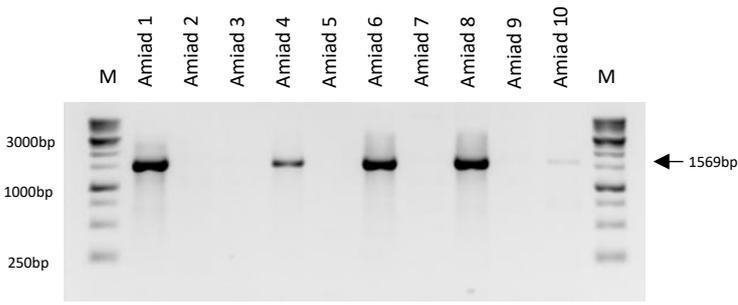
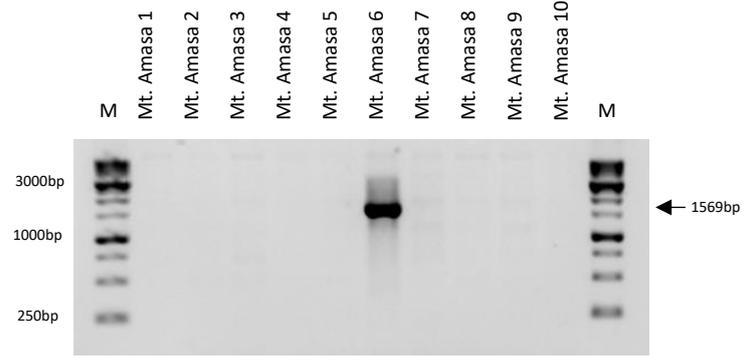
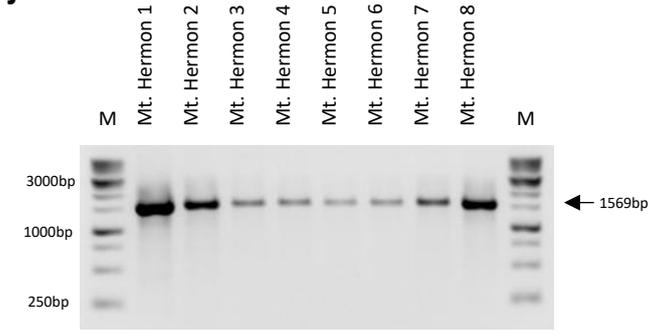
## h.2



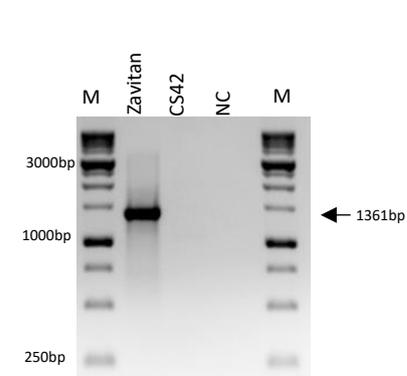
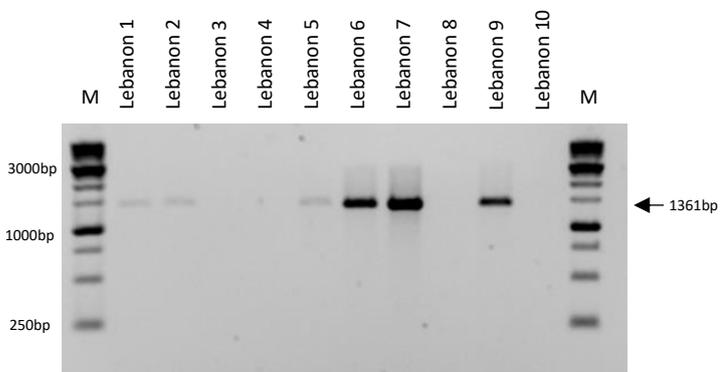
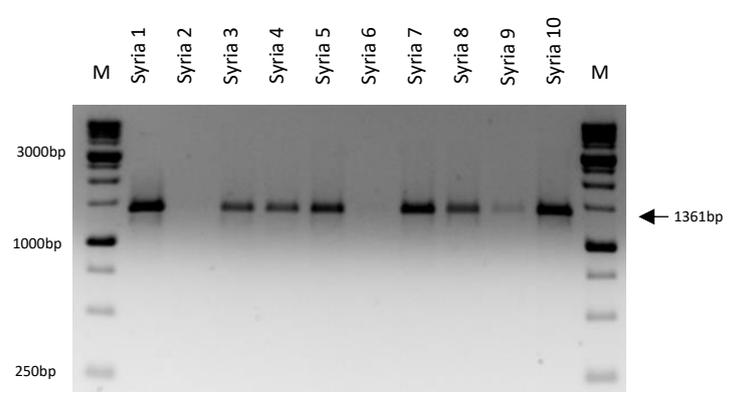
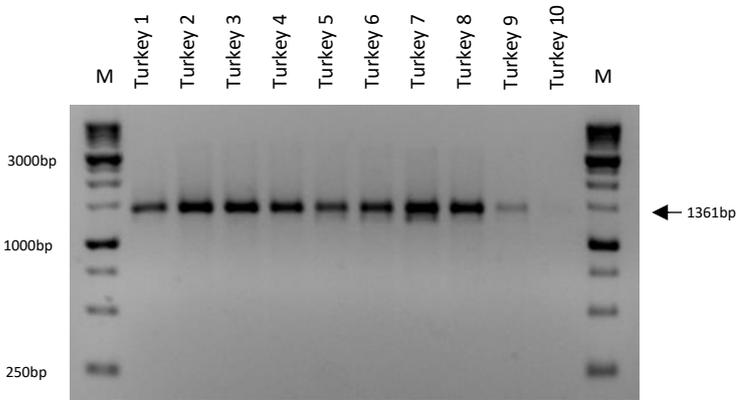
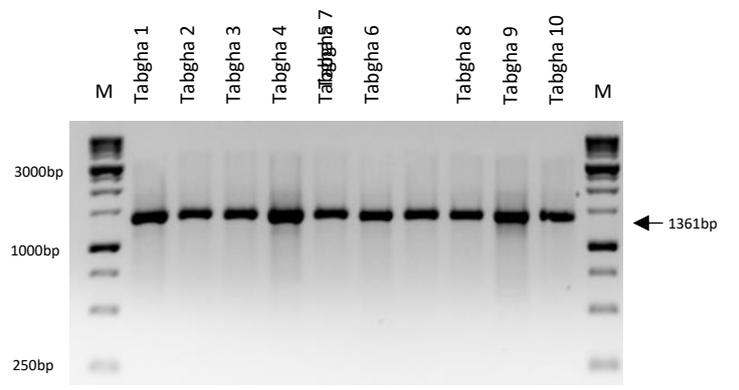
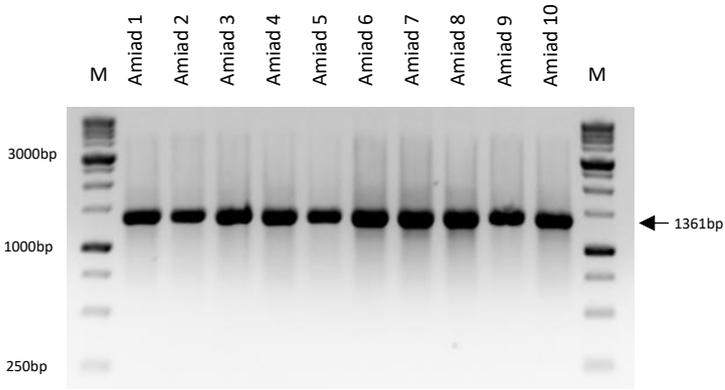
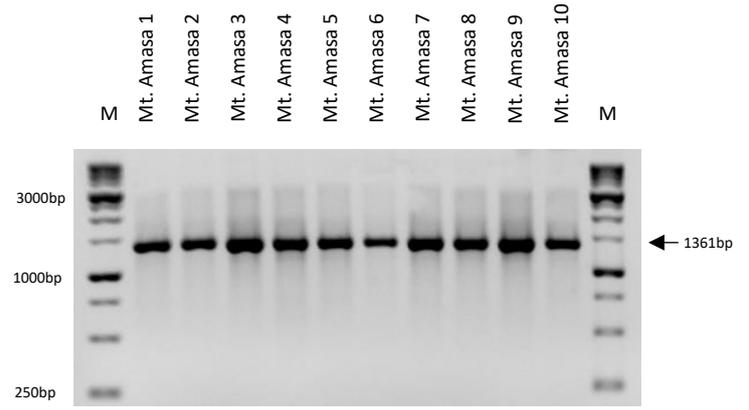
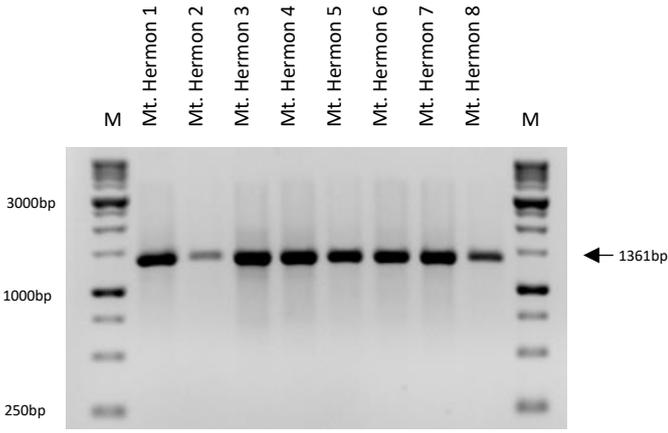
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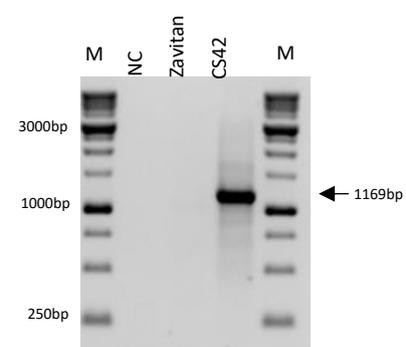
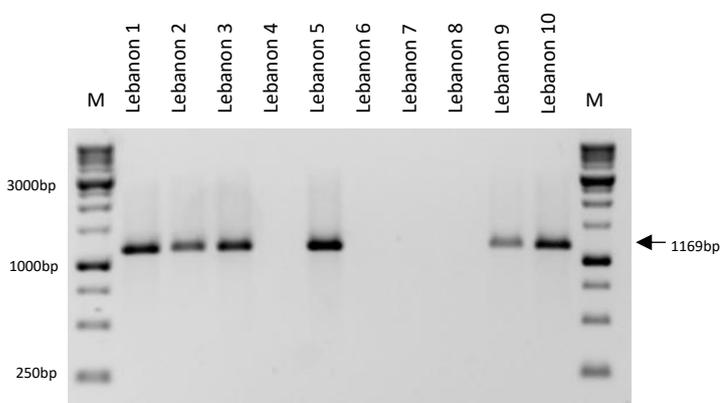
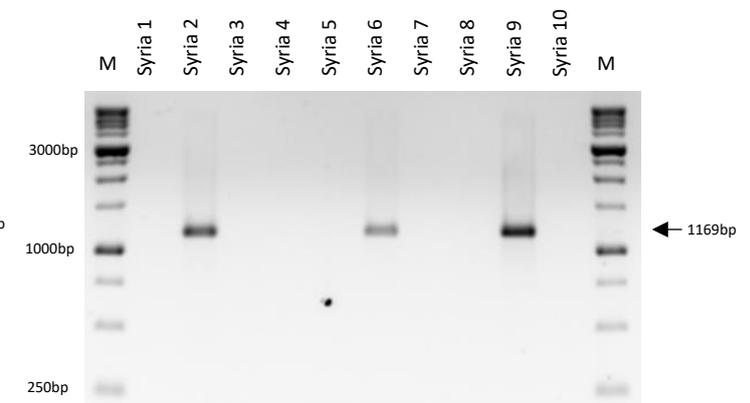
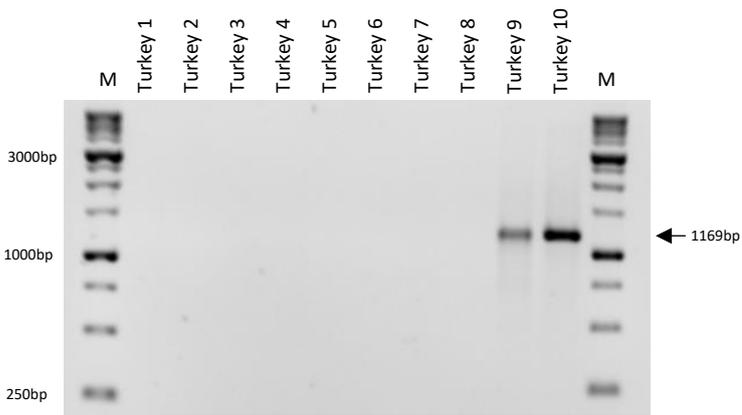
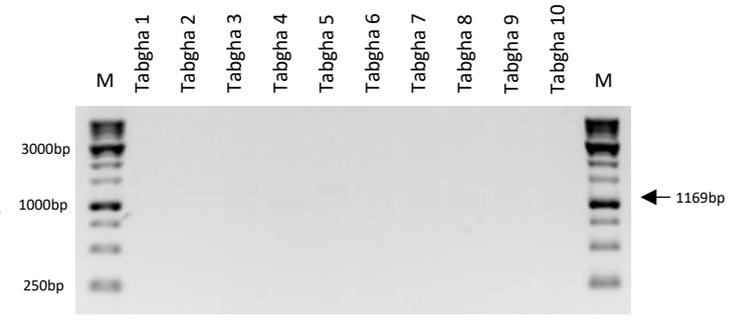
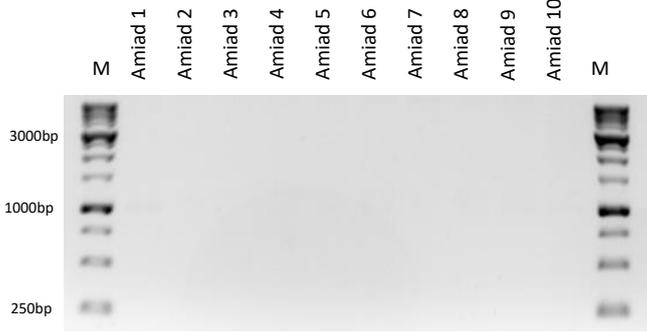
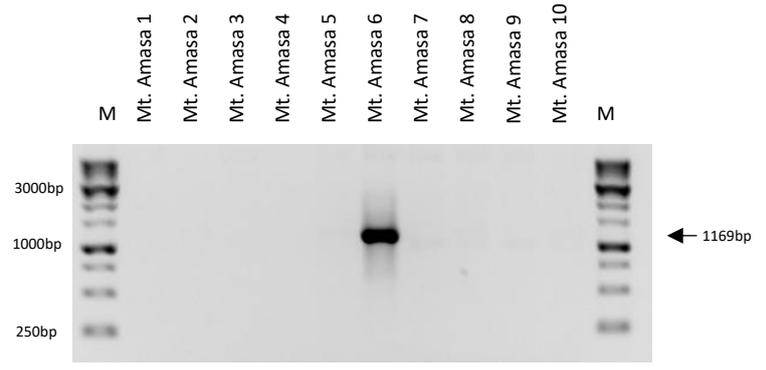
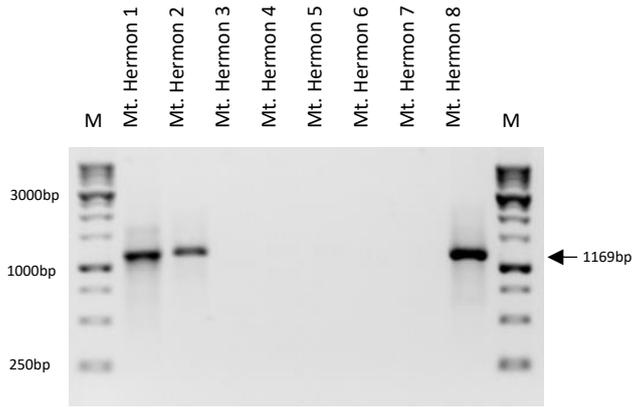
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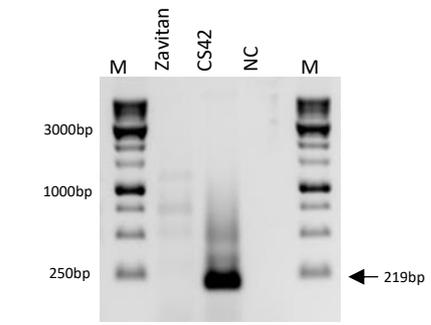
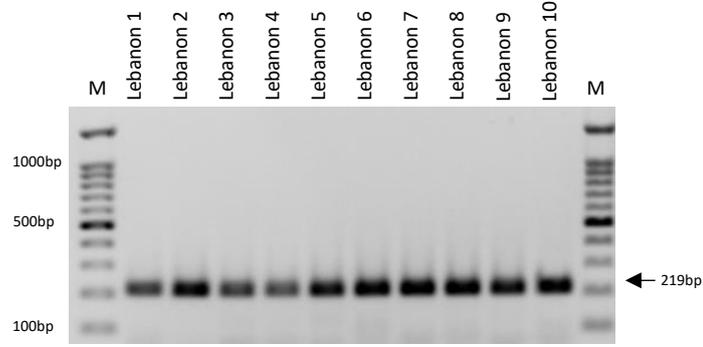
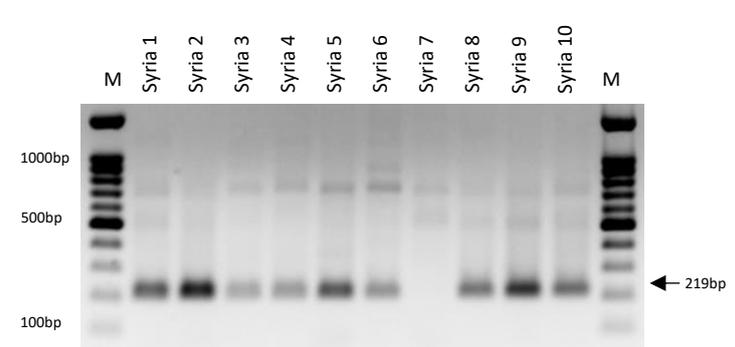
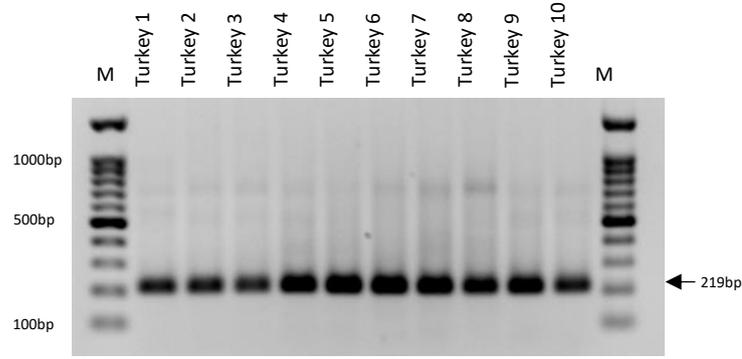
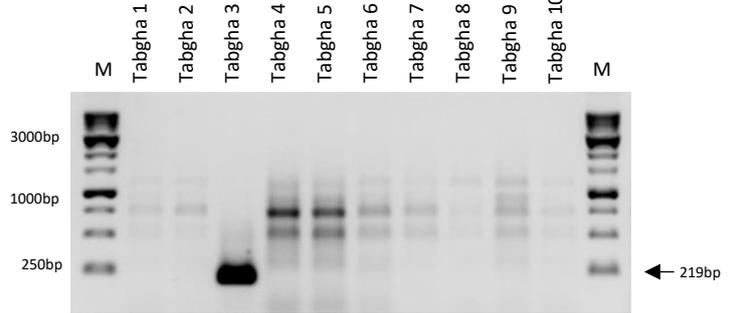
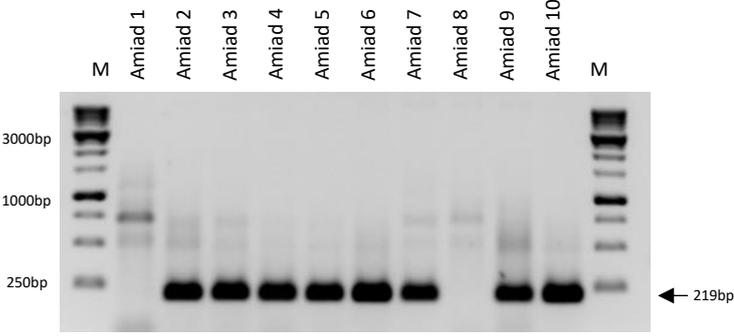
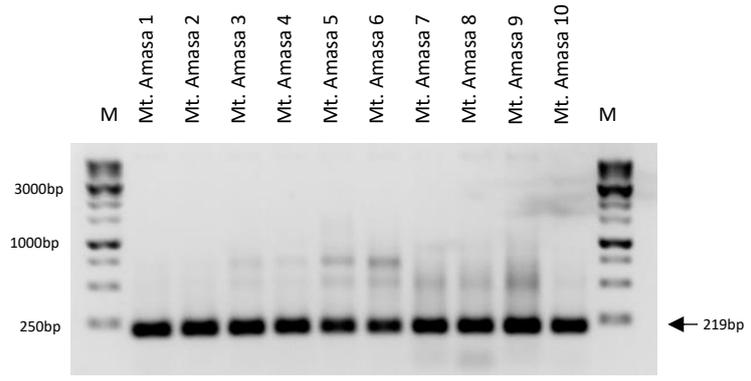
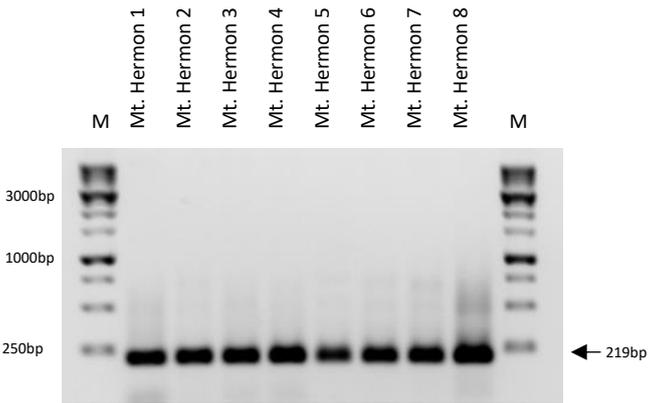
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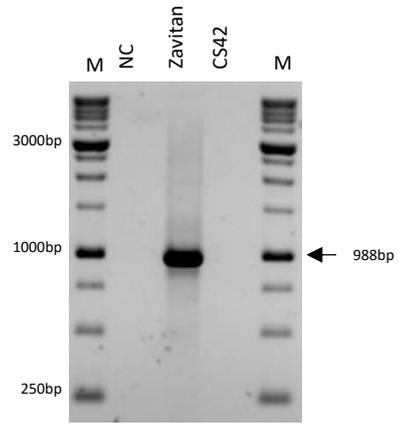
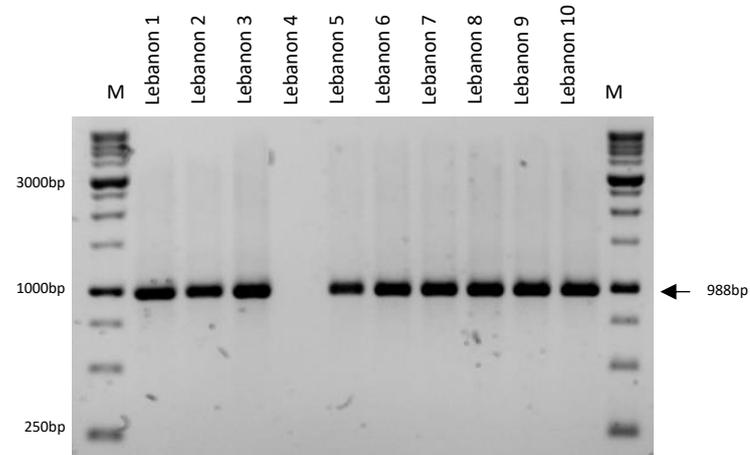
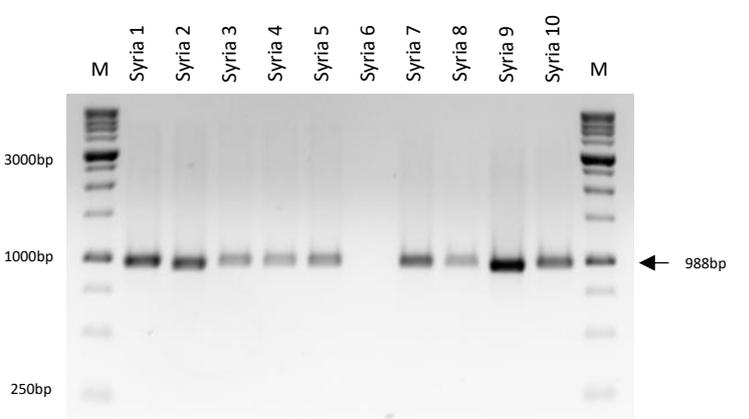
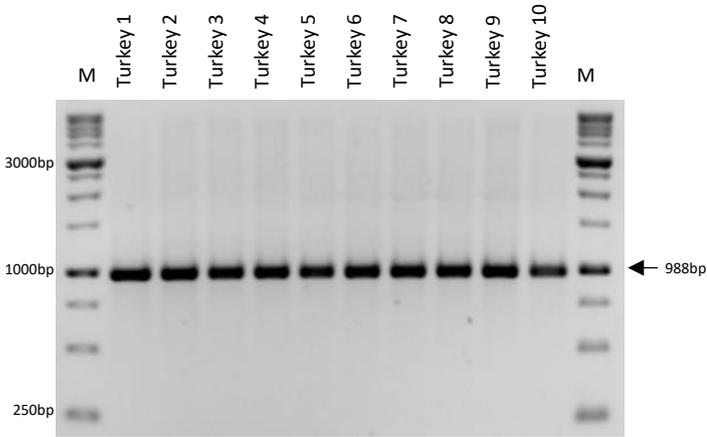
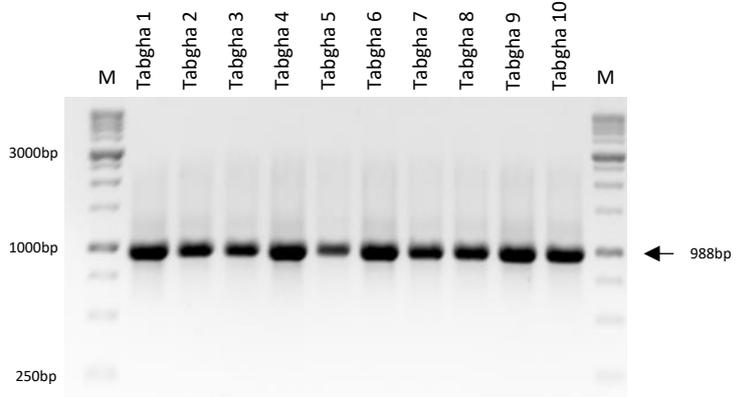
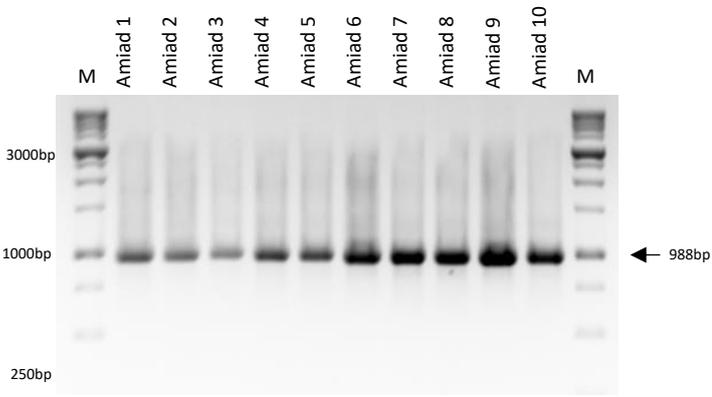
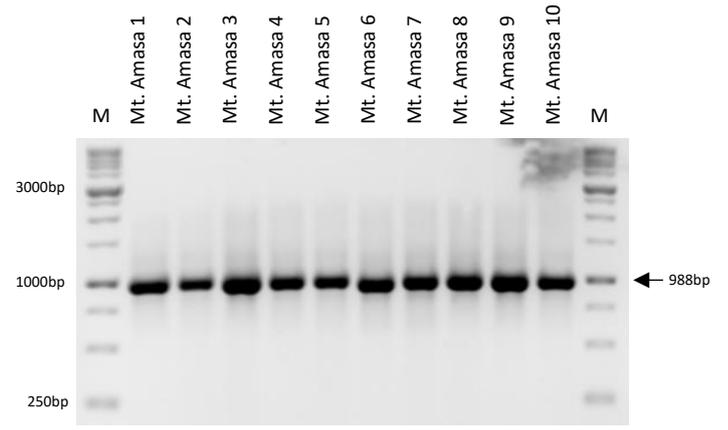
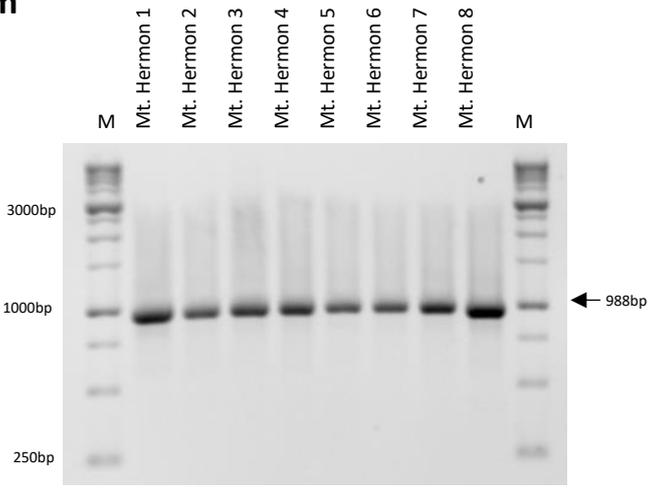
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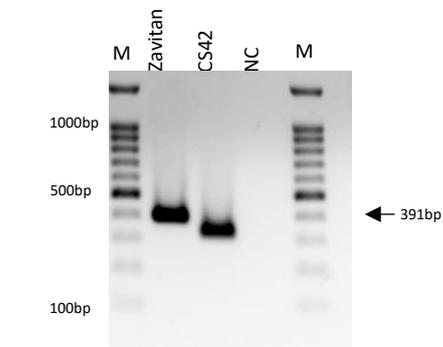
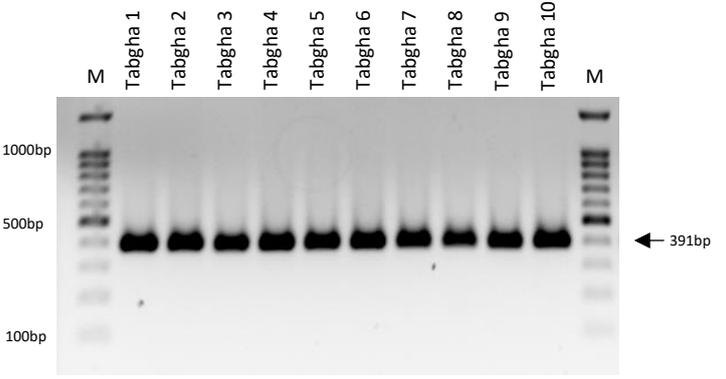
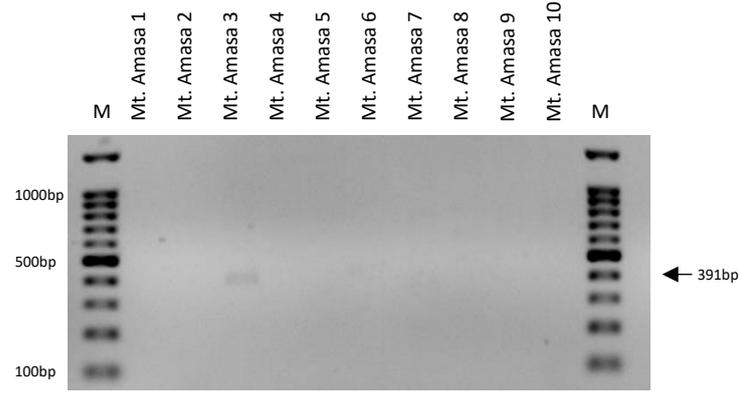
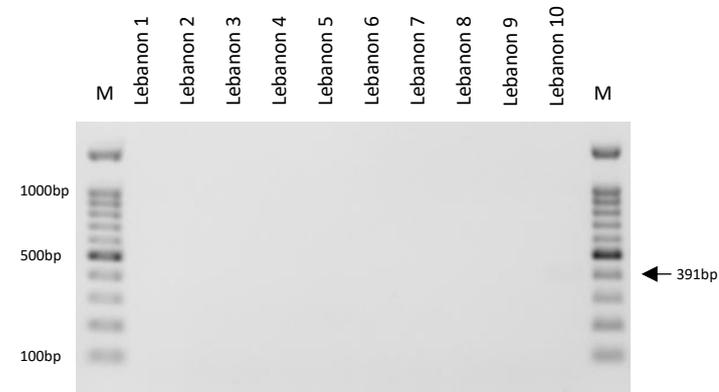
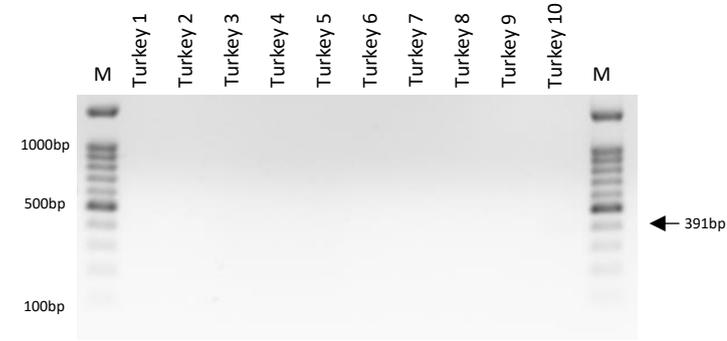
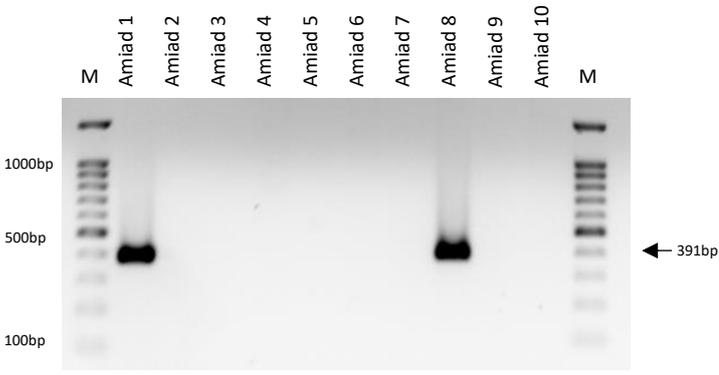
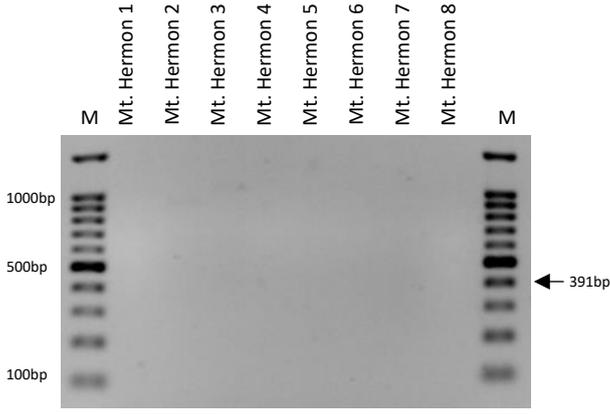
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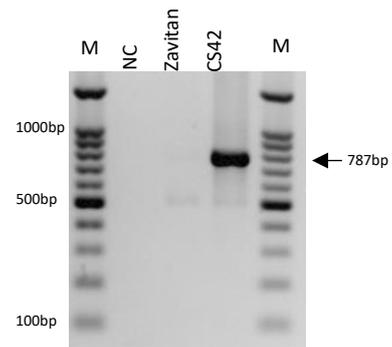
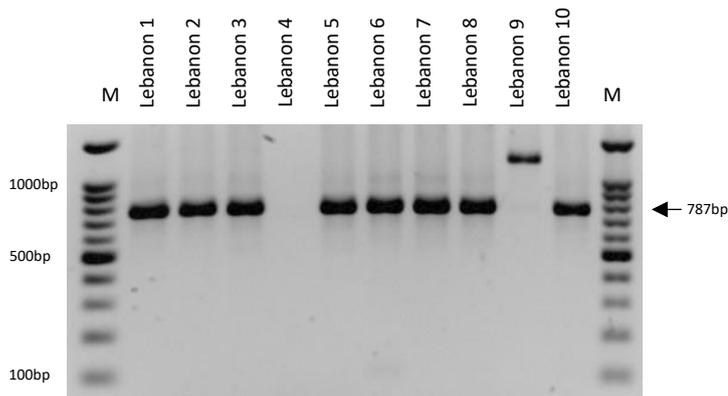
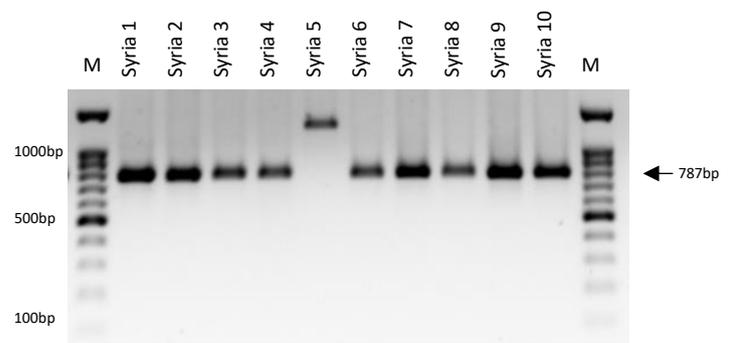
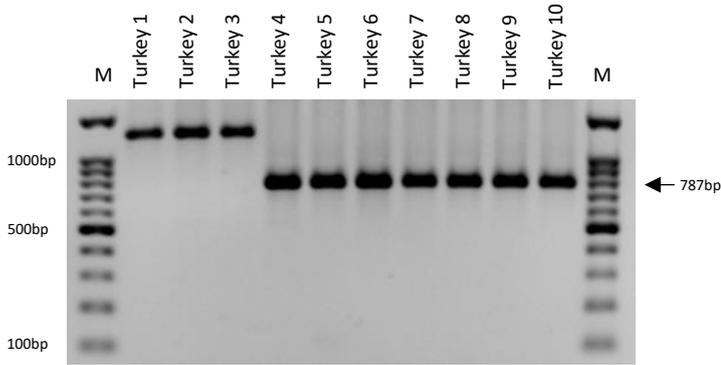
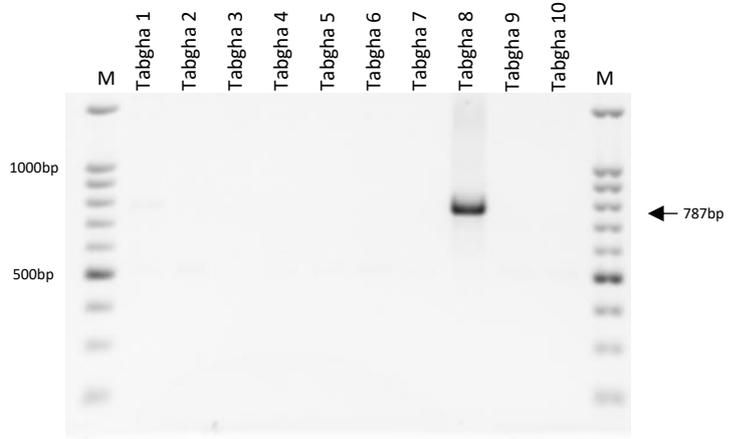
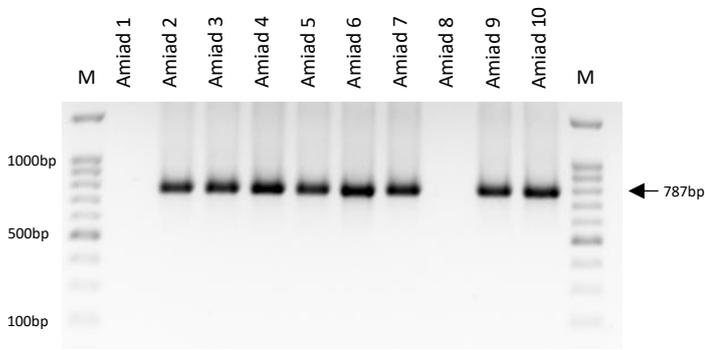
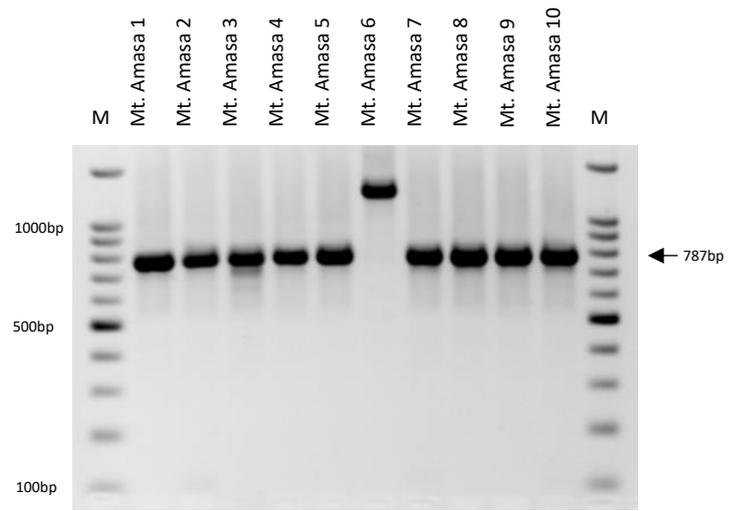
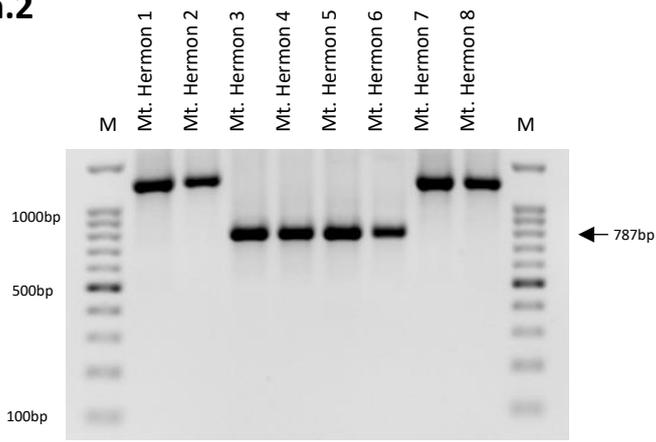
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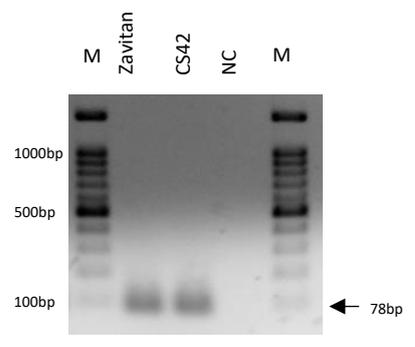
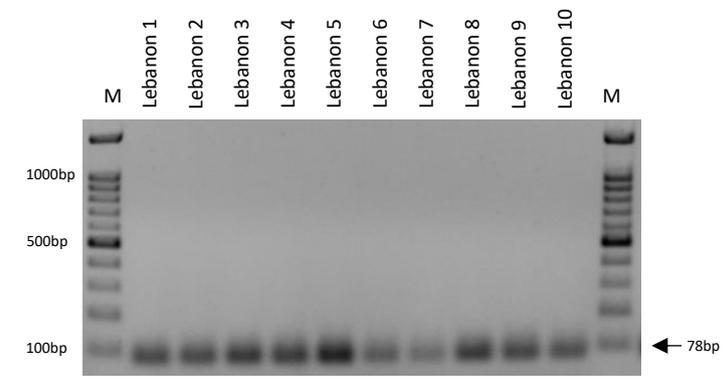
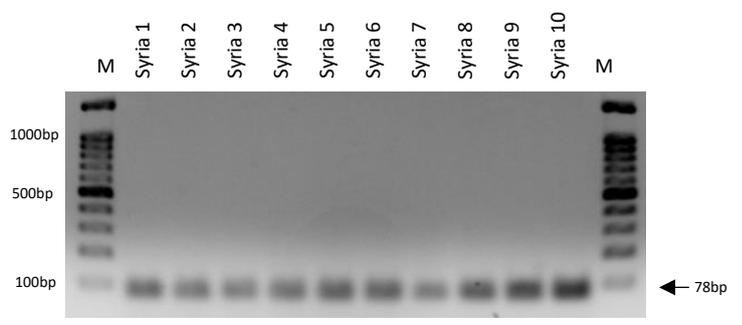
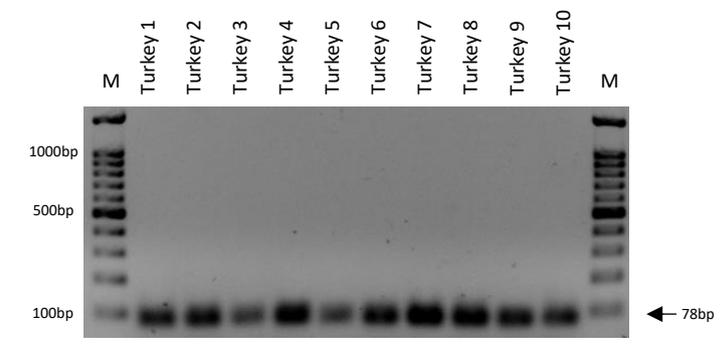
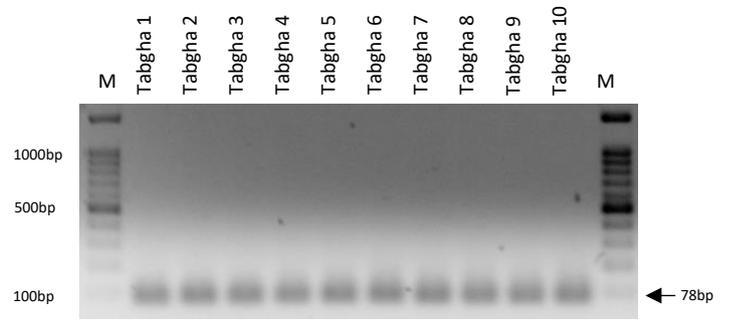
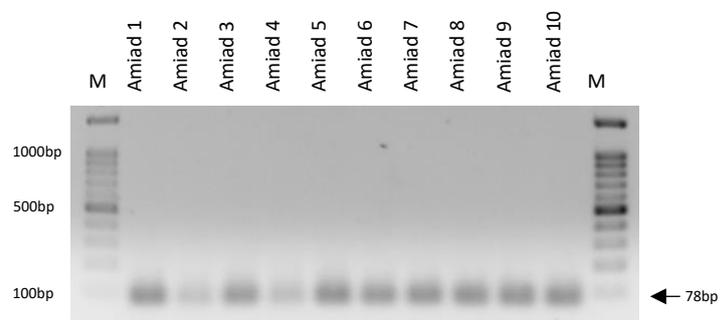
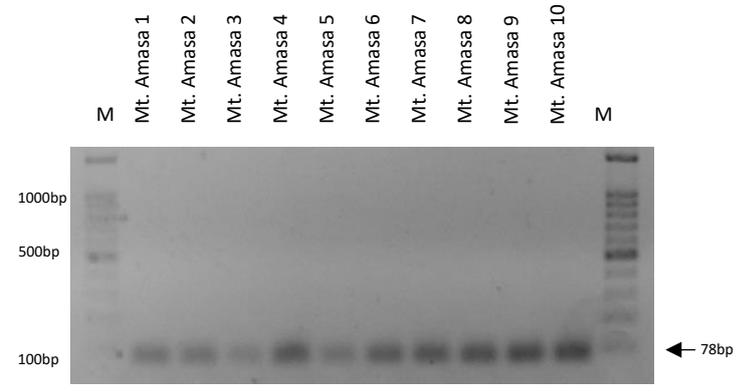
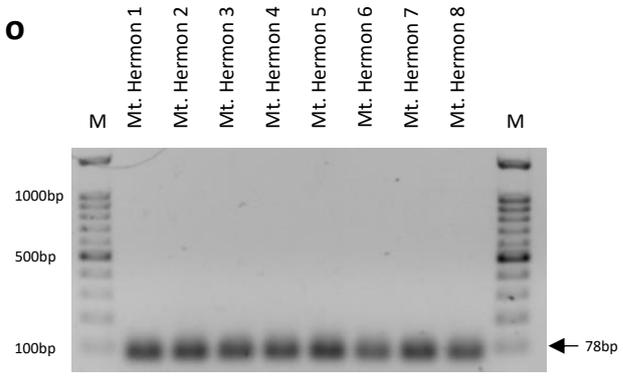
n.1



n.2



O



**Supplement figure 2:** PCR analysis within and between wild emmer populations based on genomic rearrangements between wild emmer and bread wheat using designed primers.

(a) 5A12: (a.1) Forward primer designed based on 5' flanking sequence of 5A12 locus and reverse primer designed based on 3' flanking sequence to amplify wild emmer allele, (a.2) forward primer designed based on 31kb sequence existing in bread wheat allele to amplify bread wheat allele of 5A12 locus. (b) 3A14: (b.1) Forward primer designed based on 5' flanking sequence of 3A14 locus and reverse primer designed based on 30kbp deleted sequence to amplify wild emmer allele, (b.2) forward primer designed based on 5' flanking sequence of 3A14 locus and reverse primer designed based on 3' flanking sequence to amplify bread wheat allele. (c) 3A16: (c.1) Forward primer designed based on 5' flanking sequence of 3A16 locus and reverse primer designed from 41kbp wild emmer wheat specific segment to amplify wild emmer allele, (c.2) forward primer designed based on 5' flanking sequence of 3A16 locus and reverse primer designed from 3' flanking sequence to amplify bread wheat allele (d) 5B18: (d.1) Forward primer designed based on 5' flanking sequence of 5B18 locus and reverse primer designed from 918kbp wild emmer wheat specific segment, (d.2) Forward primer designed based on 5' flanking sequence of 5B18 locus and reverse primer designed from 199kbp bread wheat specific segment. (e) 5B19: (e.1) Forward primer designed based on 5' flanking sequence of 5B19 locus and reverse primer designed from 860kbp wild emmer specific segment, (e.2) forward primer designed based on 5' flanking sequence of 5B19 locus and reverse primer designed from 864kbp bread wheat specific segment. (f) 2A23: (f.1) Forward primer designed based on 5' flanking sequence of 2A23 locus and reverse primer designed from 55kbp deleted sequence to amplify wild emmer allele, (f.2) forward primer designed based on 5' flanking sequence of 2A23 locus and reverse primer designed from 3' flanking sequence to amplify bread wheat allele. (g) 7A28: (g.1) Forward primer designed based on 5' flanking sequence of 7A28 locus and reverse primer designed from 6kbp deleted sequence to amplify wild emmer allele, (g.2) Forward primer designed based on 5' flanking sequence of 7A28 locus and reverse primer designed from 3' flanking sequence to amplify bread wheat allele (h) 7A30: (h.1) Forward primer designed based on 5' flanking sequence of 7A30 locus and reverse primer designed from 28kbp deleted sequence to amplify wild emmer allele, (h.2) Forward primer designed based on 5' flanking sequence of 7A30 locus and reverse primer designed based on 3' flanking sequence to amplify bread wheat allele (i) 5B1: Forward primer designed from 195kbp bread wheat specific segment and reverse primer designed from the 3' flanking sequence of 5B1 locus, (j) 5B2: Forward primer designed from 14kb deleted sequence in bread wheat reverse primer designed from the 3' flanking sequence of 5B2 locus, (k) 5B3: (k.1) Forward primer designed from 64kb deleted sequence in bread wheat reverse primer designed from the 3' flanking sequence of 5B3 locus to amplify wild emmer wheat allele, (k.2) Forward primer designed from 5' flanking sequence and reverse primer designed from the 3' flanking sequence of 5B3 locus to amplify bread wheat allele (l) 3B4: Forward primer designed based on 5' flanking sequence of 3B4 locus and reverse primer designed from 5' flanking sequence of 3B4 locus, (m) 3B2: : Forward primer designed based on 5' flanking sequence of 3B2 locus and reverse primer designed from 16kbp deleted sequence, (n) 5B5: (n.1) Forward primer designed from 41kbp wild emmer specific segment and reverse primer designed from the 3' flanking sequence of 5B5 locus, (n.2) forward primer designed from 10kbp bread wheat specific segment and reverse primer designed from the 3' flanking sequence of 5B5 locus. The higher, ~1210bp band in (n.2) is the expected product with a TE insertion (o) Control actin primers. 'M' refers to the size marker, 'NC' refers to the negative control (ddH<sub>2</sub>O was used as the template in its PCR reactions). Black arrow indicates the expected product size.