**Supplementary Materials:** **Table S1**: Female *Aedes aegypti* transcriptomic RNA-seq data show Leucine-Rich Repeat Proteins 7-days post infection or post injection between Key west and Orlando strains.

**Table S1A.** Female *Aedes aegypti* transcriptomic RNA-seq data show Leucine-Rich Repeat Proteins related genes expression in the Zika infection in Key West strain compared with Orlando strain *Aedes aegypti* 7-days post infection.

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| --- | --- | --- | --- |
| **Transcript ID** | **Log2FC** | **p-adj** | **Gene description** |
| AAEL000108-RA | 0.8163 | 8.6 x 10-1 | leucine aminopeptidase |
| AAEL000243-RA | -2.1351 | 1.3 x 10-2 | leucine-rich transmembrane protein |
| AAEL000424-RA | -0.1229 | 1.0 x 10-1 | leucine aminopeptidase |
| AAEL000925-RA | -0.0806 | 5.5 x 10-1 | leucine-zipper-like transcriptional regulator |
| AAEL001401-RA | 3.2722 | 2.3 x 10-27 | leucine-rich immune protein (Short) |
| AAEL001402-RA | 3.2947 | 3.3 x 10-33 | leucine-rich immune protein (Short) |
| AAEL001414-RA | 3.3722 | 2.1 x 10-36 | leucine-rich immune protein (Short) |
| AAEL001417-RA | 3.9485 | 2.0 x 10-5 | leucine-rich immune protein (Short) |
| AAEL001420-RA | 3.4335 | 1.6 x 10-73 | leucine-rich immune protein (Short) |
| AAEL001649-RA | -0.2792 | 4.7 x 10-3 | leucine aminopeptidase |
| AAEL001766-RA | 1.7007 | 2.4 x 10-2 | leucine-rich transmembrane protein |
| AAEL002166-RA | -0.0764 | 4.8 x 10-1 | leucine rich repeat (in flii) interacting protein |
| AAEL002295-RA | 2.4545 | 1.9 x 10-44 | leucine-rich transmembrane protein |
| AAEL002307-RA | 1.0570 | 6.1 x 10-2 | leucine-rich transmembrane protein |
| AAEL002615-RA | 2.2527 | 5.0 x 10-12 | leucine-rich transmembrane protein |
| AAEL003262-RA | 1.8141 | 3.9 x 10-5 | leucine-rich transmembrane protein |
| AAEL003408-RA | 1.3747 | 5.3 x 10-6 | leucine-rich transmembrane protein |
| AAEL003554-RA | 0.0380 | 8.3 x 10-1 | leucine rich repeat protein |
| AAEL003597-RA | 1.8100 | 2.7 x 10-1 | leucine-rich transmembrane protein |
| AAEL003597-RB | 1.4073 | 4.9 x 10-1 | leucine-rich transmembrane protein |
| AAEL003713-RA | 1.3970 | 7.3 x 10-4 | leucine-rich transmembrane protein |
| AAEL003720-RA | 1.1688 | 5.6 x 10-5 | leucine-rich transmembrane protein |
| AAEL003859-RA | 0.2431 | 2.1 x 10-1 | leucine-rich transmembrane protein |
| AAEL004466-RA | 2.5519 | 4.4 x 10-1 | leucine-rich immune protein (Coil-less) |
| AAEL004773-RA | -0.0661 | 6.3 x 10-1 | leucine carboxyl methyltransferase |
| AAEL005351-RA | -0.0974 | 2.1 x 10-1 | leucine-rich transmembrane protein |
| AAEL005734-RA | 0.0613 | 6.7 x 10-1 | leucine-rich transmembrane protein |
| AAEL005762-RA | 2.2277 | 2.7 x 10-5 | leucine-rich transmembrane protein |
| AAEL006026-RA | -0.0266 | 9.2 x 10-1 | leucine rich protein, putative |
| AAEL006377-RA | 1.5263 | 1.2 x 10-1 | leucine-rich immune protein (Coil-less) |
| AAEL006975-RA | 1.7989 | 8.7 x 10-5 | leucine aminopeptidase |
| AAEL007103-RA | 3.2536 | 7.5 x 10-11 | leucine-rich immune protein TM  |
| AAEL007224-RA | 1.1275 | 1.4 x 10-1 | leucine-rich immune protein (Coil-less) |
| AAEL007231-RA | 0.1956 | 1.0 x 10-0 | leucine-rich immune protein (Coil-less) |
| AAEL007363-RA | 0.8814 | 5.2 x 10-6 | leucine-rich transmembrane protein |
| AAEL007565-RA | -0.0052 | 1.0 x 10-0 | leucine rich protein, putative |
| AAEL007778-RA | 1.5531 | 8.6 x 10-15 | leucine-rich transmembrane protein |
| AAEL007785-RA | 1.0229 | 1.2 x 10-1 | leucine-rich transmembrane protein |
| AAEL008658-RA | 2.4764 | 1.6 x 10-11 | leucine-rich immune protein TM |
| AAEL009520-RA1 | 3.0383 | 4.5 x 10-25 | leucine-rich immune protein (Long) |
| AAEL009792-RA | 0.6257 | 8.4 x 10-1 | leucine-rich immune protein (Coil-less) |

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| --- | --- | --- | --- |
| **Transcript ID** | **Log2FC** | **p-adj** | **Gene description** |
| AAEL009894-RA | -0.1055 | 4.2 x 10-1 | leucine-rich immune protein (Coil-less) |
| AAEL010111-RA | 0.7172 | 2.1 x 10-1 | leucine-rich transmembrane protein |
| AAEL010125-RA | 3.2598 | 7.0 x 10-8 | leucine-rich immune protein (Coil-less) |
| AAEL010128-RA | 4.8149 | 2.4 x 10-7 | leucine-rich immune protein (Long) |
| AAEL010132-RA | 0.1733 | 1.0 x 10-0 | leucine-rich immune protein (Long) |
| AAEL010286-RA | 1.5368 | 1.1 x 10-1 | leucine-rich transmembrane protein |
| AAEL010656-RA | 2.7658 | 3.9 x 10-7 | leucine-rich immune protein (Short) |
| AAEL010772-RA | 0.3692 | 8.7 x 10-1 | Leucine-rich repeat-containing protein 50 homolog |
| AAEL011387-RA | 0.2131 | 5.3 x 10-1 | leucine-rich repeat protein |
| AAEL011760-RA | -0.2186 | 8.7 x 10-1 | leucine-rich transmembrane protein |
| AAEL012086-RA | 2.4679 | 1.7 x 10-12 | leucine-rich immune protein (Long) |
| AAEL012092-RA | 2.1252 | 2.6 x 10-28 | leucine rich repeat protein |
| AAEL012093-RA | 2.2739 | 1.9 x 10-10 | leucine-rich transmembrane protein |
| AAEL012255-RA | 4.2146 | 2.0 x 10-4 | leucine-rich immune protein (Short) |
| AAEL012763-RA | 0.2781 | 7.3 x 10-1 | leucine-rich immune protein (Coil-less) |
| AAEL012767-RA | 0.2458 | 9.9 x 10-1 | leucine-rich immune protein (Short) |
| AAEL012771-RA | -2.1327 | 9.0 x 10-2 | leucine-rich immune protein (Coil-less) |
| AAEL012911-RA | 0.4919 | 1.8 x 10-1 | leucine-rich immune protein (Coil-less) |

1 AAEL009520-RA is the same gene as AAEL024406.

**Table S1B.** Female *Aedes aegypti* transcriptomic RNA-seq data show Leucine-Rich Repeat Proteins related genes expression in Control (blood-feeding only) in the Key West strain compared with Orlando strain *Aedes aegypti* 7-days post injection.

|  |  |  |  |
| --- | --- | --- | --- |
| **Transcript ID** | **Log2FC** | **p-adj** | **Gene description** |
| AAEL000108-RA | 0.2407 | 1.0 x 10-0 | leucine aminopeptidase |
| AAEL000243-RA | 5.2443 | 1.8 x 10-26 | leucine-rich transmembrane protein |
| AAEL000424-RA | 0.2572 | 5.3 x 10-1 | leucine aminopeptidase |
| AAEL000762-RA | 1.7648 | 4.0 x 10-1 | leucine-rich immune protein (Coil-less) |
| AAEL000925-RA | -0.0274 | 1.0 x 10-0 | leucine-zipper-like transcriptional regulator |
| AAEL001401-RA | 1.2776 | 7.7 x 10-1 | leucine-rich immune protein (Short) |
| AAEL001402-RA | 0.7638 | 8.5 x 10-1 | leucine-rich immune protein (Short) |
| AAEL001414-RA | 1.1630 | 7.5 x 10-1 | leucine-rich immune protein (Short) |
| AAEL001417-RA | 1.1400 | 5.8 x 10-1 | leucine-rich immune protein (Short) |
| AAEL001420-RA | 0.9209 | 8.7 x 10-1 | leucine-rich immune protein (Short) |
| AAEL001649-RA | 0.1852 | 7.8 x 10-1 | leucine aminopeptidase |
| AAEL001766-RA | -0.2723 | 9.8 x 10-1 | leucine-rich transmembrane protein |
| AAEL002166-RA | 0.0549 | 9.8 x 10-1 | leucine rich repeat (in flii) interacting protein |
| AAEL002295-RA | -0.0871 | 1.0 x 10-0 | leucine-rich transmembrane protein |
| AAEL002307-RA | -1.9783 | 5.3 x 10-2 | leucine-rich transmembrane protein |
| AAEL002615-RA | 0.1515 | 1.0 x 10-0 | leucine-rich transmembrane protein |
| AAEL003262-RA | 1.5448 | 1.4 x 10-1 | leucine-rich transmembrane protein |
| AAEL003408-RA | -1.3019 | 2.4 x 10-1 | leucine-rich transmembrane protein |
| AAEL003554-RA | -0.0706 | 9.7 x 10-1 | leucine rich repeat protein |
| **Transcript ID** | **Log2FC** | **p-adj** | **Gene description** |
| AAEL003597-RA | 0.1151 | 1.0 x 10-0 | leucine-rich transmembrane protein |
| AAEL003713-RA | 0.1831 | 1.0 x 10-0 | leucine-rich transmembrane protein |
| AAEL003720-RA | -0.8548 | 5.4 x 10-1 | leucine-rich transmembrane protein |
| AAEL003859-RA | 0.3130 | 7.8 x 10-1 | leucine-rich transmembrane protein |
| AAEL004466-RA | 2.0123 | 8.8 x 10-1 | leucine-rich immune protein (Coil-less) |
| AAEL004773-RA | 0.0049 | 1.0 x 10-0 | leucine carboxyl methyltransferase |
| AAEL005351-RA | -0.1827 | 5.8 x 10-1 | leucine-rich transmembrane protein |
| AAEL005734-RA | -0.2283 | 6.6 x 10-1 | leucine-rich transmembrane protein |
| AAEL005762-RA | -0.4492 | 9.2 x 10-1 | leucine-rich transmembrane protein |
| AAEL006026-RA | 0.0909 | 9.6 x 10-1 | leucine rich protein, putative |
| AAEL006377-RA | 0.2883 | 1.0 x 10-0 | leucine-rich immune protein (Coil-less) |
| AAEL006975-RA | -1.4523 | 2.8 x 10-1 | leucine aminopeptidase |
| AAEL007103-RA | 1.5062 | 6.7 x 10-1 | leucine-rich immune protein TM  |
| AAEL007224-RA | 1.6625 | 6.4 x 10-1 | leucine-rich immune protein (Coil-less) |
| AAEL007231-RA | -0.2972 | 1.0 x 10-0 | leucine-rich immune protein (Coil-less) |
| AAEL007363-RA | -0.3259 | 8.7 x 10-1 | leucine-rich transmembrane protein |
| AAEL007565-RA | -0.0600 | 9.8 x 10-1 | leucine rich protein, putative |
| AAEL007778-RA | 1.1993 | 5.6 x 10-1 | leucine-rich transmembrane protein |
| AAEL007785-RA | -0.4638 | 9.3 x 10-1 | leucine-rich transmembrane protein |
| AAEL008658-RA | 0.3448 | 9.8 x 10-1 | leucine-rich immune protein TM |
| AAEL009520-RA**1** | 1.7824 | 6.0 x 10-1 | leucine-rich immune protein (Long) |
| AAEL009792-RA | -0.0468 | 1.0 x 10-0 | leucine-rich immune protein (Coil-less) |
| AAEL009894-RA | -0.9167 | 2.9 x 10-4 | leucine-rich immune protein (Coil-less) |
| AAEL010111-RA | 0.5586 | 8.8 x 10-1 | leucine-rich transmembrane protein |
| AAEL010125-RA | 1.6477 | 5.3 x 10-1 | leucine-rich immune protein (Coil-less) |
| AAEL010128-RA | -0.4969 | 9.1 x 10-1 | leucine-rich immune protein (Long) |
| AAEL010132-RA | 1.1041 | 6.9 x 10-1 | leucine-rich immune protein (Long) |
| AAEL010286-RA | 3.0287 | 1.5 x 10-5 | leucine-rich transmembrane protein |
| AAEL010656-RA | -0.0488 | 1.0 x 10-0 | leucine-rich immune protein (Short) |
| AAEL010772-RA | -0.0798 | 1.0 x 10-0 | Leucine-rich repeat-containing protein 50 homolog |
| AAEL011387-RA | 0.1003 | 1.0 x 10-0 | leucine-rich repeat protein |
| AAEL011760-RA | 2.0781 | 8.8 x 10-2 | leucine-rich transmembrane protein |
| AAEL012086-RA | 2.1793 | 4.9 x 10-1 | leucine-rich immune protein (Long) |
| AAEL012092-RA | -0.2727 | 9.7 x 10-1 | leucine rich repeat protein |
| AAEL012093-RA | -0.5269 | 7.5 x 10-1 | leucine-rich transmembrane protein |
| AAEL012255-RA | 0.5067 | 9.4 x 10-1 | leucine-rich immune protein (Short) |
| AAEL012538-RA | 1.3374 | 7.5 x 10-1 | leucine-rich immune protein (Short) |
| AAEL012763-RA | 0.2824 | 9.6 x 10-1 | leucine-rich immune protein (Coil-less) |
| AAEL012767-RA | 2.3014 | 1.8 x 10-1 | leucine-rich immune protein (Short) |
| AAEL012771-RA | 2.5966 | 3.0 x 10-1 | leucine-rich immune protein (Coil-less) |
| AAEL012911-RA | -0.6582 | 7.1 x 10-1 | leucine-rich immune protein (Coil-less) |
| AAEL015627-RA | -0.1674 | 1.0 x 10-1 | leucine-rich immune protein (Coil-less) |

**1** AAEL009520-RA is the same gene as AAEL024406.

**Table S1C.** Female *Aedes aegypti* transcriptomic RNA-seq data show Leucine-Rich Repeat Proteins related genes dysregulated in the Key West strain *Aedes aegypti* 7-days post infection with ZIKV compared with Control in Key West strain.

|  |  |  |  |
| --- | --- | --- | --- |
| **Transcript ID** | **Log2FC** | **p-adj** | **Gene description** |
| AAEL000108-RA | -1.7731 | 4.8 x 10-1 | leucine aminopeptidase |
| AAEL000243-RA | -6.6469 | 7.6 x 10-44 | leucine-rich transmembrane protein |
| AAEL000424-RA | -0.3141 | 3.1 x 10-1 | leucine aminopeptidase |
| AAEL000762-RA | -1.1738 | 5.4 x 10-1 | leucine-rich immune protein (Coil-less) |
| AAEL000925-RA | -0.0007 | 1.0 x 10-0 | leucine-zipper-like transcriptional regulator |
| AAEL001401-RA | -1.3103 | 6.4 x 10-1 | leucine-rich immune protein (Short) |
| AAEL001402-RA | -0.8166 | 7.5 x 10-1 | leucine-rich immune protein (Short) |
| AAEL001414-RA | -1.4239 | 5.2 x 10-1 | leucine-rich immune protein (Short) |
| AAEL001417-RA | -1.5243 | 1.7 x 10-1 | leucine-rich immune protein (Short) |
| AAEL001420-RA | -1.3793 | 5.7 x 10-1 | leucine-rich immune protein (Short) |
| AAEL001649-RA | -0.2873 | 4.6 x 10-1 | leucine aminopeptidase |
| AAEL001766-RA | 0.1960 | 9.8 x 10-1 | leucine-rich transmembrane protein |
| AAEL002166-RA | -0.0592 | 9.5 x 10-1 | leucine rich repeat (in flii) interacting protein |
| AAEL002295-RA | 0.3188 | 7.8 x 10-1 | leucine-rich transmembrane protein |
| AAEL002307-RA | 1.3559 | 2.1 x 10-1 | leucine-rich transmembrane protein |
| AAEL002615-RA | 0.1694 | 9.9 x 10-1 | leucine-rich transmembrane protein |
| AAEL003262-RA | -0.1092 | 1.0 x 10-0 | leucine-rich transmembrane protein |
| AAEL003408-RA | 2.1477 | 1.8 x 10-4 | leucine-rich transmembrane protein |
| AAEL003554-RA | 0.1223 | 7.6 x 10-1 | leucine rich repeat protein |
| AAEL003597-RB | -0.1468 | 1.0 x 10-0 | leucine-rich transmembrane protein |
| AAEL003713-RA | -0.0746 | 1.0 x 10-0 | leucine-rich transmembrane protein |
| AAEL003720-RA | 0.8861 | 9.8 x 10-2 | leucine-rich transmembrane protein |
| AAEL003859-RA | -0.0278 | 1.0 x 10-0 | leucine-rich transmembrane protein |
| AAEL004466-RA | 0.4468 | 1.0 x 10-0 | leucine-rich immune protein (Coil-less) |
| AAEL004773-RA | -0.0228 | 1.0 x 10-0 | leucine carboxyl methyltransferase |
| AAEL005351-RA | 0.1178 | 6.8 x 10-1 | leucine-rich transmembrane protein |
| AAEL005734-RA | 0.2204 | 5.8 x 10-1 | leucine-rich transmembrane protein |
| AAEL005762-RA | 0.5146 | 7.0 x 10-1 | leucine-rich transmembrane protein |
| AAEL006026-RA | -0.0849 | 9.3 x 10-1 | leucine rich protein, putative |
| AAEL006377-RA | -0.8786 | 8.4 x 10-1 | leucine-rich immune protein (Coil-less) |
| AAEL006975-RA | 2.0656 | 1.0 x 10-2 | leucine aminopeptidase |
| AAEL007103-RA | -0.5660 | 9.0 x 10-1 | leucine-rich immune protein TM  |
| AAEL007224-RA | 0.0491 | 1.0 x 10-0 | leucine-rich immune protein (Coil-less) |
| AAEL007231-RA | -2.5365 | 4.8 x 10-1 | leucine-rich immune protein (Coil-less) |
| AAEL007363-RA | 0.3441 | 6.6 x 10-1 | leucine-rich transmembrane protein |
| AAEL007565-RA | 0.0044 | 1.0 x 10-0 | leucine rich protein, putative |
| AAEL007778-RA | -1.4858 | 3.1 x 10-1 | leucine-rich transmembrane protein |
| AAEL007785-RA | 0.5315 | 8.3 x 10-1 | leucine-rich transmembrane protein |
| AAEL008658-RA | 0.3609 | 8.9 x 10-1 | leucine-rich immune protein TM |
| AAEL009520-RA**1** | -0.9495 | 7.8 x 10-1 | leucine-rich immune protein (Long) |
| AAEL009792-RA | -1.2373 | 6.2 x 10-1 | leucine-rich immune protein (Coil-less) |

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| --- | --- | --- | --- |
| **Transcript ID** | **Log2FC** | **p-adj** | **Gene description** |
| AAEL009894-RA | 0.8665 | 9.7 x 10-5 | leucine-rich immune protein (Coil-less) |
| AAEL010111-RA | -0.2184 | 9.6 x 10-1 | leucine-rich transmembrane protein |
| AAEL010125-RA | -1.5972 | 4.5 x 10-1 | leucine-rich immune protein (Coil-less) |
| AAEL010128-RA | -0.0478 | 1.0 x 10-0 | leucine-rich immune protein (Long) |
| AAEL010132-RA | -1.7077 | 3.7 x 10-1 | leucine-rich immune protein (Long) |
| AAEL010286-RA | -3.3918 | 5.0 x 10-9 | leucine-rich transmembrane protein |
| AAEL010656-RA | 0.2515 | 9.6 x 10-1 | leucine-rich immune protein (Short) |
| AAEL010772-RA | -0.3624 | 9.7 x 10-1 | Leucine-rich repeat-containing protein 50 homolog |
| AAEL011387-RA | -0.1587 | 9.4 x 10-1 | leucine-rich repeat protein |
| AAEL011760-RA | -0.9940 | 4.4 x 10-1 | leucine-rich transmembrane protein |
| AAEL012086-RA | -1.4555 | 6.0 x 10-1 | leucine-rich immune protein (Long) |
| AAEL012092-RA | 0.5027 | 4.8 x 10-1 | leucine rich repeat protein |
| AAEL012093-RA | 0.9895 | 7.1 x 10-2 | leucine-rich transmembrane protein |
| AAEL012255-RA | -0.4482 | 9.4 x 10-1 | leucine-rich immune protein (Short) |
| AAEL012538-RA | -0.1787 | 1.0 x 10-1 | leucine-rich immune protein (Short) |
| AAEL012763-RA | -1.1587 | 1.5 x 10-1 | leucine-rich immune protein (Coil-less) |
| AAEL012767-RA | -2.6500 | 8.8 x 10-2 | leucine-rich immune protein (Short) |
| AAEL012771-RA | -1.2948 | 6.3 x 10-1 | leucine-rich immune protein (Coil-less) |
| AAEL012911-RA | 0.8990 | 2.6 x 10-1 | leucine-rich immune protein (Coil-less) |
| AAEL015627-RA | -0.1380 | 1.0 x 10-0 | leucine-rich immune protein (Coil-less) |

**1** AAEL009520-RA is the same gene as AAEL024406.

**Table S1D.** Female *Aedes aegypti* transcriptomic RNA-seq data show Leucine-Rich Repeat Proteins related genes dysregulated in the Orlando strain *Aedes aegypti* 7-days post infection with ZIKV compared with Control in Orlando strain.

|  |  |  |  |
| --- | --- | --- | --- |
| **Transcript ID** | **Log2FC** | **p-adj** | **Gene description** |
| AAEL000108-RA | -2.3592 | 3.5 x 10-1 | leucine aminopeptidase |
| AAEL000243-RA | 0.7358 | 7.8 x 10-1 | leucine-rich transmembrane protein |
| AAEL000424-RA | 0.0654 | 8.7 x 10-1 | leucine aminopeptidase |
| AAEL000925-RA | 0.0531 | 9.7 x 10-1 | leucine-zipper-like transcriptional regulator |
| AAEL001401-RA | -3.3173 | 6.3 x 10-2 | leucine-rich immune protein (Short) |
| AAEL001402-RA | -3.3550 | 6.1 x 10-5 | leucine-rich immune protein (Short) |
| AAEL001414-RA | -3.6456 | 5.0 x 10-2 | leucine-rich immune protein (Short) |
| AAEL001417-RA | -4.3471 | 7.7 x 10-2 | leucine-rich immune protein (Short) |
| AAEL001420-RA | -3.9058 | 4.5 x 10-2 | leucine-rich immune protein (Short) |
| AAEL001649-RA | 0.1785 | 5.5 x 10-1 | leucine aminopeptidase |
| AAEL001766-RA | -1.7846 | 1.9 x 10-1 | leucine-rich transmembrane protein |
| AAEL002166-RA | 0.0738 | 9.0 x 10-1 | leucine rich repeat (in flii) interacting protein |
| AAEL002295-RA | -2.2315 | 3.4 x 10-2 | leucine-rich transmembrane protein |
| AAEL002307-RA | -1.6840 | 4.1 x 10-2 | leucine-rich transmembrane protein |
| AAEL002615-RA | -1.9453 | 3.0 x 10-1 | leucine-rich transmembrane protein |
| AAEL003262-RA | -0.3746 | 9.6 x 10-1 | leucine-rich transmembrane protein |
| AAEL003408-RA | -0.5226 | 7.4 x 10-1 | leucine-rich transmembrane protein |
| AAEL003554-RA | 0.0152 | 1.0 x 10-0 | leucine rich repeat protein |
| **Transcript ID** | **Log2FC** | **p-adj** | **Gene description** |
| AAEL003597-RA | -1.1217 | 9.3 x 10-1 | leucine-rich transmembrane protein |
| AAEL003597-RB | -1.4416 | 6.3 x 10-1 | leucine-rich transmembrane protein |
| AAEL003713-RA | -1.4416 | 6.3 x 10-1 | leucine-rich transmembrane protein |
| AAEL003720-RA | -1.2985 | 4.1 x 10-1 | leucine-rich transmembrane protein |
| AAEL003859-RA | -1.1459 | 2.6 x 10-1 | leucine-rich transmembrane protein |
| AAEL004466-RA | 0.0440 | 1.0 x 10-0 | leucine-rich immune protein (Coil-less) |
| AAEL004773-RA | -0.1240 | 1.0 x 10-0 | leucine carboxyl methyltransferase |
| AAEL005351-RA | 0.0501 | 9.8 x 10-1 | leucine-rich transmembrane protein |
| AAEL005734-RA | 0.0344 | 9.8 x 10-1 | leucine-rich transmembrane protein |
| AAEL005762-RA | -0.0691 | 9.5 x 10-1 | leucine-rich transmembrane protein |
| AAEL006026-RA | -2.1727 | 1.2 x 10-1 | leucine rich protein, putative |
| AAEL006377-RA | 0.0329 | 1.0 x 10-0 | leucine-rich immune protein (Coil-less) |
| AAEL006975-RA | -2.1250 | 1.9 x 10-2 | leucine aminopeptidase |
| AAEL007103-RA | -1.1907 | 2.6 x 10-1 | leucine-rich immune protein TM  |
| AAEL007224-RA | -2.3203 | 1.9 x 10-2 | leucine-rich immune protein (Coil-less) |
| AAEL007231-RA | 0.5661 | 9.6 x 10-1 | leucine-rich immune protein (Coil-less) |
| AAEL007363-RA | -3.0437 | 1.6 x 10-1 | leucine-rich transmembrane protein |
| AAEL007565-RA | -0.8595 | 3.8 x 10-2 | leucine rich protein, putative |
| AAEL007778-RA | -0.0497 | 9.6 x 10-1 | leucine-rich transmembrane protein |
| AAEL007785-RA | -1.8464 | 1.3 x 10-2 | leucine-rich transmembrane protein |
| AAEL008658-RA | -0.9593 | 5.4 x 10-1 | leucine-rich immune protein TM |
| AAEL009520-RA1 | -1.7802 | 8.1 x 10-2 | leucine-rich immune protein (Long) |
| AAEL009792-RA | -2.2074 | 2.8 x 10-4 | leucine-rich immune protein (Coil-less) |
| AAEL009894-RA | 0.0551 | 9.9 x 10-1 | leucine-rich immune protein (Coil-less) |
| AAEL010111-RA | -0.3721 | 9.2 x 10-1 | leucine-rich transmembrane protein |
| AAEL010125-RA | -3.2166 | 2.2 x 10-2 | leucine-rich immune protein (Coil-less) |
| AAEL010128-RA | -5.3692 | 2.8 x 10-6 | leucine-rich immune protein (Long) |
| AAEL010132-RA | -0.7796 | 8.7 x 10-1 | leucine-rich immune protein (Long) |
| AAEL010286-RA | -1.9108 | 5.4 x 10-1 | leucine-rich transmembrane protein |
| AAEL010656-RA | -2.5623 | 4.4 x 10-3 | leucine-rich immune protein (Short) |
| AAEL010772-RA | -0.8164 | 9.2 x 10-1 | Leucine-rich repeat-containing protein 50 homolog |
| AAEL011387-RA | -0.2728 | 8.2 x 10-1 | leucine-rich repeat protein |
| AAEL011760-RA | 1.2954 | 3.9 x 10-1 | leucine-rich transmembrane protein |
| AAEL012086-RA | -1.7527 | 2.6 x 10-2 | leucine-rich immune protein (Long) |
| AAEL012092-RA | -1.9051 | 1.2 x 10-1 | leucine rich repeat protein |
| AAEL012093-RA | -1.8185 | 2.4 x 10-2 | leucine-rich transmembrane protein |
| AAEL012255-RA | -4.1624 | 3.1 x 10-5 | leucine-rich immune protein (Short) |
| AAEL012763-RA | -1.1534 | 1.8 x 10-1 | leucine-rich immune protein (Coil-less) |
| AAEL012767-RA | -0.6035 | 9.8 x 10-1 | leucine-rich immune protein (Short) |
| AAEL012771-RA | 3.4269 | 5.6 x 10-2 | leucine-rich immune protein (Coil-less) |
| AAEL012911-RA | -0.2531 | 9.4 x 10-1 | leucine-rich immune protein (Coil-less) |

1 AAEL009520-RA is the same gene as AAEL024406.

**Figure S1A-E.** *AaeLRIM3, AaeLRIM4, AaeLRIM15, AaeLRIM16,* and *AaeLRIM17* relative expression in the all developmental stages.



**Figure S1A.** *AaeLRIM3*



**Figure S1B.** *AaeLRIM4*



**Figure S1C.***AaeLRIM15*



**Figure S1D.** *AaeLRIM16*



**Figure S1E.** *AaeLRIM17*

**Figure S1A-E.** *AaeLRIM3,*  *AaeLRIM4, AaeLRIM15, AaeLRIM16,* and *AaeLRIM17* relative expression in the all developmental stages, from eggs (Eg), larvae (Lv), pupae (Pu), and adults *Ae. aegypti*, including male (M1, male 1-d-old; M3, male 3-d-old; M5, male 5-d-old; M7, male 7-d-old; and M10, male 10-d-old) and female (F1, female 1-d-old; F3, female 3-d-old; F5, female 5-d-old; F7, female 7-d-old; and 10F, female 10-dold) in the Key West strain (KW) and Orlando (OR) strain *Aedes* *aegypti*. (**A**) *AaeLRIM3*; (**B**) *AaeLRIM4;* (**C**) *AaeLRIM15;* (**D**) *AaeLRIM16;* and (**E**) *AaeLRIM17.*

**Figure S2A-B**. . *AaeLRIM3, AaeLRIM4, AaeLRIM15,*  *AaeLRIM16,*and *AaeLRIM17* relative expression level fold changes in *Aedes aegypti* female infected with ZIKV (Key West strain and Orlando strain).



**Figure S2A.** KW strain female *Ae. aegypti*



**Figure S2B.** Orlandostrain female *Ae. aegypti*

**Figure S2A-B**. . *AaeLRIM3, AaeLRIM4, AaeLRIM15,*  *AaeLRIM16,*and *AaeLRIM17* relative expression level fold changes in *Aedes aegypti* female infected with ZIKV. The fold change was calculated using the 2 *[-average* ΔΔ*CT ]* method. ΔCt (Control) = Ct (*AaeLRIM1*/*AaeAPL1*) –Ct (*AeaActin*); ΔCt (infected-ZIKV) = Ct (*AaeLRIM1*/*AaeAPL1*) – Ct (*AeaActin*); ΔΔCt =ΔCt (infected-ZIKV)−ΔCt (Control). The 3, 12, 24, 48, 72, 120, 168, and 240 h represented gene expression post infected with ZIKV. (A) KW strain female *Ae. aegypti;* (B) Orlando strain female *Ae. aegypti*.

**Figure S3A-B**. *AaeLRIM3, AaeLRIM4, AaeLRIM15,*  *AaeLRIM16,*and *AaeLRIM17* relative expression level fold changes in *Aedes aegypti* female infected with CHIKV(Key West strain and Orlando strain).



**Figure S3A.** KW strain female *Ae. aegypti*



**Figure S3B.** Orlandostrain female *Ae. aegypti.*

**Figure S3A-B**. *AaeLRIM3, AaeLRIM4, AaeLRIM15,*  *AaeLRIM16,*and *AaeLRIM17* relative expression level fold changes in *Aedes aegypti* female infected with CHIKV. The fold change was calculated using the 2 *[-average* ΔΔ*CT ]* method. ΔCt (Control) = Ct (*AaeLRIM1*/*AaeAPL1*) –Ct (*AeaActin*); ΔCt (infected-CHIKV) = Ct (*AaeLRIM1*/*AaeAPL1*) – Ct (*AeaActin*); ΔΔCt =ΔCt (infected-CHIKV)−ΔCt (Control). The 3, 24, 48, 72, 120, 168, and 240 h represented gene expression post infected with CHIKV. (**A**) KW strain female *Ae. aegypti*; (**B**) Orlando strain female *Ae. aegypti*.