

Table S1. The role of 36 *mosGCTL* genes in DENV-2 infection in *A. aegypti*.

| <i>Gene Symbol</i> | <i>Gene ID</i> | <i>DENV burden 6dpi (Fold/Mock)</i> | <i>p value</i> |
|--------------------|----------------|---|--------------------|
| mosGCTL-1 | AAEL000563 | 1.02±1.13 | |
| mosGCTL-2 | AAEL000533 | 0.79±0.31 | |
| mosGCTL-3 | AAEL000535 | 0.26±0.21 | <i>p<0.0001</i> |
| mosGCTL-4 | AAEL000543 | 1.09±0.67 | |
| mosGCTL-5 | AAEL000556 | 0.71±0.65 | |
| mosGCTL-6 | AAEL000283 | N/A* | |
| mosGCTL-7 | AAEL002524 | 1.33±0.91 | |
| mosGCTL-8 | AAEL004679 | 1.06±0.68 | |
| mosGCTL-9 | AAEL005482 | 0.95±0.70 | |
| mosGCTL-10 | AAEL005641 | 1.40±1.41 | |
| mosGCTL-11 | AAEL006456 | 1.21±0.83 | |
| mosGCTL-12 | AAEL008299 | 1.53±0.83 | |
| mosGCTL-13 | AAEL008681 | 0.80±0.65 | |
| mosGCTL-14 | AAEL009209 | 0.94±0.50 | |
| mosGCTL-15 | AAEL010992 | 0.40±0.44 | <i>p<0.005</i> |
| mosGCTL-16 | AAEL011070 | 0.88±0.65 | |
| mosGCTL-17 | AAEL011079 | N/A | |
| mosGCTL-18 | AAEL011402 | 0.76±0.59 | |
| mosGCTL-19 | AAEL011404 | 0.44±0.35 | <i>p<0.0005</i> |
| | AAEL011407 | <i>Similar to AAEL011404 90.8% identity in Nucleotide</i> | |
| mosGCTL-20 | AAEL011408 | 0.54±0.25 | <i>p<0.05</i> |
| mosGCTL-21 | AAEL011446 | 0.92±0.97 | |
| mosGCTL-22 | AAEL011453 | 0.52±0.26 | <i>p<0.0005</i> |

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|------------|------------|---|--------------------|
| mosGCTL-23 | AAEL011455 | 0.51±0.33 | <i>p<0.0005</i> |
| mosGCTL-24 | AAEL011607 | 0.59±0.49 | <i>p<0.0001</i> |
| mosGCTL-25 | AAEL011609 | N/A | |
| mosGCTL-26 | AAEL017265 | 0.51±0.23 | <i>p<0.0005</i> |
| mosGCTL-27 | AAEL011612 | 0.71±0.65 | |
| mosGCTL-28 | AAEL011616 | 1.41±0.87 | |
| mosGCTL-29 | AAEL011619 | 1.48±1.09 | |
| mosGCTL-30 | AAEL011621 | 1.66±1.25 | |
| mosGCTL-31 | AAEL011622 | 0.73±0.34 | |
| mosGCTL-32 | AAEL012353 | 0.40±0.51 | <i>p<0.0005</i> |
| | AAEL014382 | <i>Similar to AAEL011607 98.3% identity in Nucleotide</i> | |
| mosGCTL-33 | AAEL014385 | 1.19±0.61 | |
| | AAEL014390 | <i>Similar to AAEL011619 98.9% identity in Nucleotide</i> | |

Double-stranded RNAs (dsRNA) against *mosGCTLs* were synthesized and microinjected into mosquito thorax to knock down the target gene. After 3 days post dsRNA microinjection, 10 M.I.D₅₀ (Mosquito Infective Dose 50%) DENV-2 was injected into the mosquitoes. After 6 days, mosquitoes were sacrificed and the virus burden assessed. 9 of the 33 genes showed a significant decrease of the virus burden (*p<0.05*). Statistical analysis was done with the *Mann-Whitney* test.

*N/A, gene not analyzed.