

**S1 Table.** List of the core components of the piRNA pathway in *Ae. aegypti* and their orthologous in *Ae. albopictus*.

	<i>Aedes aegypti</i>	<i>Aedes albopictus</i>
Gene	Gene ID <sup>1</sup>	Gene ID <sup>2</sup>
<i>Ago3</i>	AAEL007823	AALF025916/ AALF025919 <sup>4</sup>
<i>Piwi1/3</i>	AAEL013692	AALF005499 <sup>5</sup>
<i>Piwi2</i>	AAEL008098	AALF006708 <sup>6</sup>
<i>Piwi4</i>	AAEL007698	AALF006337/ AALF008582 <sup>7</sup>
<i>Piwi5</i>	AAEL013233	XM_019686836.1/ XM_019692765.1 <sup>8</sup>
<i>Piwi6</i>	AAEL013227	AALF016369
<i>Piwi7</i>	AAEL006287	AALF015479/AALF007445 <sup>9</sup>

<sup>1</sup>Gene ID is based on AaegL5

<sup>2</sup>Gene ID is based on AaLoF1 for *Ago3*, *Piwi1/3*, *Piwi2*, *Piwi4*, *Piwi6* and *PIWI7*; on canu\_80X\_arrow2.2 for *Piwi5*.

<sup>4</sup>In AaLoF1, two genes, AALF025916 and AALF025919, which differ uniquely in the length of their annotated 5'UTR regions, are identified.

<sup>5</sup>Two genes, AALF005499 and AALF005498, are annotated in AaLoF1; sequencing of exon-intron boundaries and cDNA confirmed the gene structure of AALF005499.

<sup>6</sup>Two genes, AALF006534 and AALF006708, are identified in AaLoF1. The only notable difference between the two genes is a tandem duplication of 98bp in AALF006534, which generates a sixth exons. Sequencing of exon-intron boundaries and cDNAs from different mosquitoes confirmed the gene structure of AALF006708.

<sup>7</sup>In AaLoF1, two genes, AALF06337 and AALF008582, which differ uniquely in the length of their 3'UTR regions, are annotated.

<sup>8</sup>No sequence orthologous to AAEL013233 was retrieved in AaLoF1, but three sequences were identified in the genome of C6/36 cells. XM\_019692797.1.

<sup>9</sup>Two genes, AALF015479 and AALF007445, are identified in AaLoF1, with a >96% sequence similarity, suggesting they are alternative alleles of the same gene.