

## Supplementary information

### Assessment of the Dengue Virus Prolonged Infection in Dermal Fibroblasts and Hair Follicle Dermal Papilla Cells

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**Table S1. The primer sequences used in qPCR analysis.**

| Genes           | Primer sequences                                                      |
|-----------------|-----------------------------------------------------------------------|
| DENV2-5'UTR     | F: 5'-AGTTGTTAGTCTACGTGGACCGA-3'<br>R: 5'-CGCGTTTCAGCATATTGAAAG-3'    |
| IRF3            | F: 5'-TTCCCGGGAGGGATAAGC-3'<br>R: 5'-GGGCAGAGCGGAAATTCC-3'            |
| IRF7            | F: 5'-TCCCCACGCTATACCATCTACCT-3'<br>R: 5'-ACAGCCAGGGTTCCAGCTT-3'      |
| IFN $\lambda$ 1 | F: 5'-AGGCCCTGTCCCCACTTC-3'<br>R: 5'-GAGATTTGAACCTGCCAATGTG-3'        |
| IFN $\alpha$    | F: 5'-CCTCGCCCTTTGCTTTACTG-3'<br>R: 5'-CAGAGAGCAGCTTGACTTGCA-3'       |
| IFN $\beta$     | F: 5'-TGAGCAGTCTGCACCTGAAA-3'<br>R: 5'-GCTTGAAGCAATTGTCCCGT-3'        |
| IL6             | F: 5'-TGTCCTGCAGCCACTGGTTC-3'<br>R: 5'-AAGCCAGAGCTGTGCAGATGAGTA-3'    |
| IL8             | F: 5'-ACACTGCGCCAACACAGAAATTA-3'<br>R: 5'-TTTGCTTGAAGTTTCACTGGCATC-3' |
| TNF $\alpha$    | F: 5'-GACAAGCCTGTAGCCCATGTTGTA-3'<br>R: 5'-CAGCCTTGGCCCTTGAAGA-3'     |
| Rig-I           | F: 5'-TGTAGGTAGGGTCCAGGGTCTTC-3'<br>R: 5'-GCAGAGGCCGGCATGAC-3'        |
| MAVS            | F: 5'-CATCAGGAGCAGGACACAGA-3'<br>R: 5'-TCTCTGCACCCTGTTTACCC-3'        |
| OAS1            | F: 5'-AGAAGGCAGCTCACGAAAC-3'<br>R: 5'-CCACCACCCAAGTTTCCTG-3'          |
| MxA             | F: 5'-GCTACACACCGTGACGGATATGG-3'<br>R: 5'-CGAGCTGGATTGGAAAGCCC-3'     |
| CASP3           | F: 5'-TGAAACAGTATGCCGACAAGCTT-3'<br>R: 5'-TTGCCACCTTTCGGTTAACC-3'     |
| CASP7           | F: 5'-GCACGGAAAAGACCTGGAAA-3'<br>R: 5'-GCCTGGCAACTCTGTCATTCA-3'       |

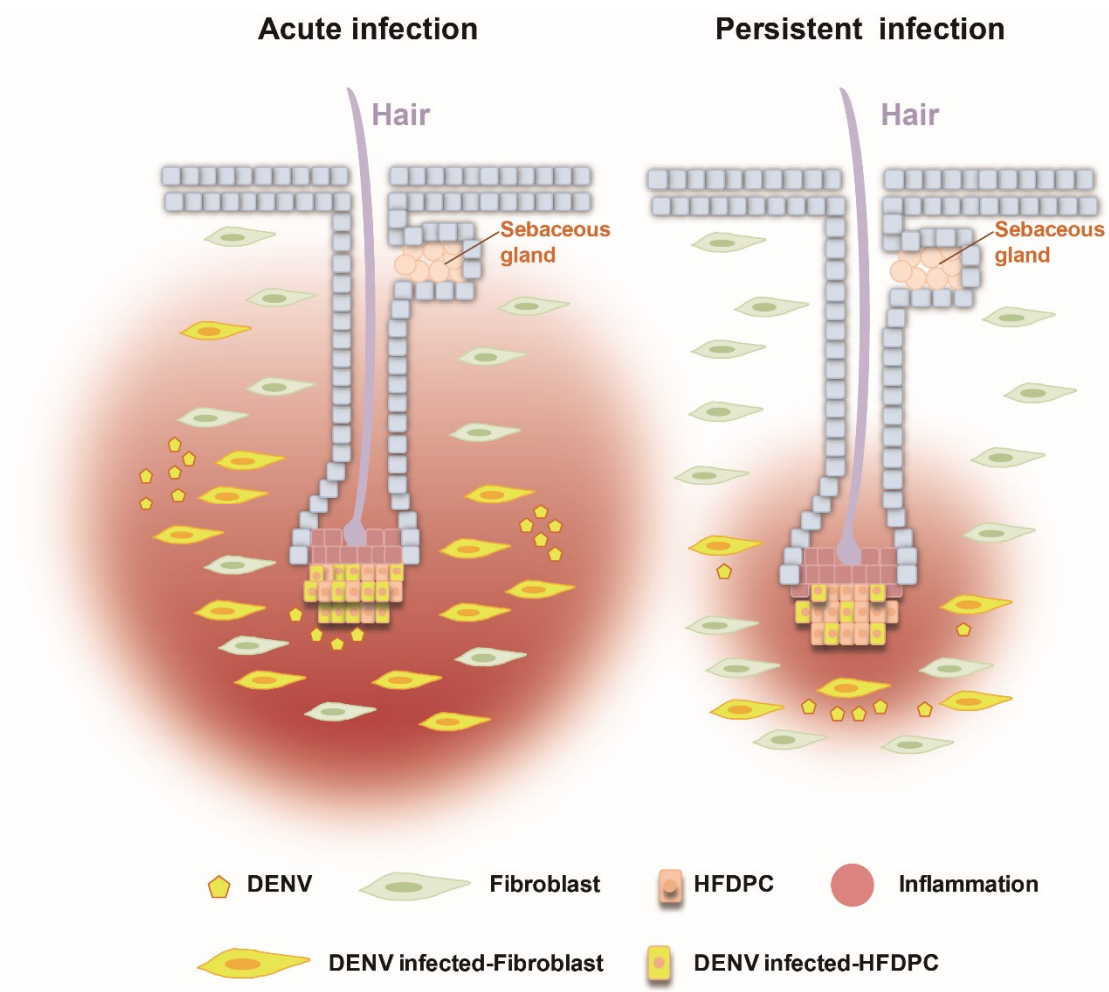
|       |                                                                   |
|-------|-------------------------------------------------------------------|
| RIP1  | F:5'- AATGGCGGCACCCTCTACTA-3'<br>R:5'- CTTTGCGTTGACGTCATTGAG-3'   |
| hcMyc | F: 5'- GGCGAACACACAACGTCT-3'<br>R: 5'- CACGCAGGGCAAAAAGC-3'       |
| WNT1  | F: 5'- CTCATGAACCTTCACAACAACGA-3'<br>R: 5'- TGGCGCATCTCGGAGAAT-3' |
| WNT4  | F: 5'- CCAGAGGCAGGTGCAGATG-3'<br>R: 5'- GCGCACCGAGTCCATGAC-3'     |
| GAPDH | F: 5'-CAACTGGTCGTGGACAACCAT-3'<br>R: 5'-GCACGGACACTCACAATGTTC-3'  |

**Table S2. The correlation of virus titer and host gene induction<sup>#</sup>.**

| HFPDC cells                |                                          |                               |                               |                                 |                                |                               |
|----------------------------|------------------------------------------|-------------------------------|-------------------------------|---------------------------------|--------------------------------|-------------------------------|
|                            | DENV-2<br>titer<br>vs.<br>IFN- $\lambda$ | DENV-2<br>titer<br>vs.<br>IL6 | DENV-2<br>titer<br>vs.<br>IL8 | DENV-2<br>titer<br>vs.<br>RIG-I | DENV-2<br>titer<br>vs.<br>OAS1 | DENV-2<br>titer<br>vs.<br>MxA |
| Pearson r                  | 0.965                                    | 0.9573                        | 0.8974                        | 0.9124                          | 0.7858                         | 0.6873                        |
| 95% confidence<br>interval | 0.05455 ~<br>0.9993                      | -0.04734 ~<br>0.9991          | -0.4631<br>~0.9979            | -0.3953 ~<br>0.9982             | -0.7162 ~<br>0.9953            | -0.8065 ~<br>0.9927           |
| R squared                  | 0.9313                                   | 0.9164                        | 0.8053                        | 0.8326                          | 0.6174                         | 0.4724                        |
| P value, (two-<br>tailed)  | <b>0.035</b>                             | <b>0.0427</b>                 | 0.1026                        | 0.0876                          | 0.2142                         | 0.3127                        |
| Significant? (p <<br>0.05) | <b>Yes, *</b>                            | <b>Yes, *</b>                 | No                            | No                              | No                             | No                            |
| WS1 cells                  |                                          |                               |                               |                                 |                                |                               |
|                            | DENV-2<br>titer<br>vs.<br>IFN- $\beta$   | DENV-2<br>titer<br>vs.<br>IL6 | DENV-2<br>titer<br>vs.<br>IL8 | DENV-2<br>titer<br>vs.<br>RIG-I | DENV-2<br>titer<br>vs.<br>OAS1 | DENV-2<br>titer<br>vs.<br>MxA |
| Pearson r                  | 0.7876                                   | 0.6528                        | 0.6621                        | 0.6116                          | 0.9242                         | 0.8469                        |
| 95% confidence<br>interval | -0.7138 to<br>0.9953                     | -0.8274 to<br>0.9917          | -0.8222 to<br>0.992           | -0.8479 to<br>0.9905            | -0.3303 to<br>0.9984           | -0.6137 to<br>0.9967          |
| R squared                  | 0.6203                                   | 0.4261                        | 0.4384                        | 0.3741                          | 0.8541                         | 0.7173                        |
| P value, (two-<br>tailed)  | 0.2124                                   | 0.3472                        | 0.3379                        | 0.3884                          | 0.0758                         | 0.1531                        |
| Significant? (P<<br>0.05)  | No                                       | No                            | No                            | No                              | No                             | No                            |

<sup>#</sup>, The correlation between DENV virus titer and RNA level of cytokines or signaling proteins was analyzed by Person correlation test (GraphPad Prism software).

Figure S1



**Figure S1.** Schematic diagram of the hypothesis. The diagram represents the hypothetical scenario of DENV-2 prolonged infection in WS1 cells and HFDPCs. The acute and prolonged DENV-2 infection mediated inflammation is presented in circle background with red gradient.