

TABLE S1. Small RNA-*seq* in WT- and F508del-CFBE cells showing those miRNAs upregulated (A) or downregulated (B) by TGF- $\beta$ 1 that are predicted to target human CFTR 3'UTR. These miRNAs are marked with black circles in the volcano plots in Figure 8. Only miRNAs with  $-\log_{10}$  (P value) > 1.6 ( $p < 0.025$ ) are listed. The miRNAs uniquely dysregulated in WT- or F508del-CFBE cells are in bold. Three miRNAs in italics are not shown in Figure 8 due to the plot cut-off area. Sequences of miRNAs were extracted from miRBase database and were used in miRmap database to search their predicted binding in 3'UTR of CFTR mRNA. \*,  $p < 0.05$ ; \*\*,  $p < 0.01$ ; \*\*\*,  $p < 0.001$ ; \*\*\*\*,  $p < 0.0001$ .

| A. Upregulated miRNAs      |        |                        |                            |        |                        |
|----------------------------|--------|------------------------|----------------------------|--------|------------------------|
| WT-CFBE Cells              | Log2FC | $-\log_{10}$ (P Value) | F508del-CFBE Cells         | Log2FC | $-\log_{10}$ (P Value) |
| <b>hsa-miR-3168**</b>      | 2.459  | 2.844                  | <i>hsa-miR-100-3p****</i>  | 1.772  | 15.686                 |
| <i>hsa-miR-143-3p****</i>  | 2.339  | 53.788                 | <b>hsa-miR-371b-3p****</b> | 1.464  | 6.016                  |
| <b>hsa-miR-3150b-3p*</b>   | 2.297  | 1.787                  | <i>hsa-miR-181a-3p****</i> | 1.283  | 7.659                  |
| <b>hsa-miR-8071***</b>     | 2.064  | 3.436                  | <i>hsa-miR-143-3p****</i>  | 1.224  | 8.421                  |
| <b>hsa-miR-152-5p**</b>    | 1.680  | 2.715                  | hsa-miR-1185-1-3p*         | 1.078  | 1.749                  |
| <b>hsa-miR-1266-5p**</b>   | 1.661  | 2.393                  | <b>hsa-miR-548h-3p****</b> | 1.053  | 4.629                  |
| <b>hsa-miR-625-3p*</b>     | 1.432  | 1.773                  | hsa-miR-485-3p**           | 0.941  | 3.962                  |
| <b>hsa-miR-3924**</b>      | 0.992  | 2.025                  | <b>hsa-miR-154-5p*</b>     | 0.869  | 1.806                  |
| <i>hsa-miR-485-3p****</i>  | 0.898  | 5.405                  | <b>hsa-miR-4679*</b>       | 0.863  | 1.665                  |
| <i>hsa-miR-100-3p****</i>  | 0.861  | 5.733                  | hsa-miR-376a-3p*           | 0.849  | 1.789                  |
| <i>hsa-miR-1185-1-3p**</i> | 0.822  | 2.163                  | <i>hsa-miR-181c-3p****</i> | 0.834  | 5.444                  |
| <b>hsa-miR-6837-3p****</b> | 0.780  | 4.295                  | <b>hsa-miR-539-3p**</b>    | 0.823  | 2.666                  |
| <i>hsa-miR-510-3p****</i>  | 0.711  | 6.281                  | <i>hsa-miR-27b-5p***</i>   | 0.707  | 3.934                  |
| <b>hsa-let-7a-2-3p**</b>   | 0.646  | 2.003                  | <b>hsa-miR-20a-3p*</b>     | 0.620  | 1.707                  |
| <b>hsa-miR-1915-3p*</b>    | 0.610  | 1.706                  | <i>hsa-miR-510-3p***</i>   | 0.593  | 3.440                  |
| <b>hsa-miR-4662a-5p***</b> | 0.594  | 3.488                  | <b>hsa-miR-6083**</b>      | 0.546  | 2.032                  |
| <b>hsa-miR-376b-3p**</b>   | 0.579  | 2.053                  | <i>hsa-miR-92a-1-5p*</i>   | 0.525  | 1.969                  |
| <b>hsa-miR-4441**</b>      | 0.555  | 2.082                  | <b>hsa-miR-31-5p*</b>      | 0.485  | 1.786                  |
| <b>hsa-miR-636**</b>       | 0.535  | 2.523                  | <b>hsa-miR-4456*</b>       | 0.484  | 1.607                  |
| <i>hsa-miR-376a-3p***</i>  | 0.514  | 3.439                  | <b>hsa-miR-6817-3p*</b>    | 0.453  | 1.669                  |
| <b>hsa-miR-2117*</b>       | 0.491  | 1.973                  | <b>hsa-miR-455-5p**</b>    | 0.451  | 2.047                  |
| <i>hsa-miR-92a-1-5p**</i>  | 0.489  | 2.196                  | <b>hsa-miR-132-5p*</b>     | 0.448  | 1.883                  |
| <i>hsa-miR-181c-3p***</i>  | 0.431  | 3.894                  | <b>hsa-miR-1292-5p*</b>    | 0.444  | 1.702                  |
| <i>hsa-miR-27b-5p**</i>    | 0.389  | 2.197                  |                            |        |                        |
| <b>hsa-miR-193b-3p*</b>    | 0.388  | 1.804                  |                            |        |                        |
| <i>hsa-miR-181a-3p**</i>   | 0.386  | 2.196                  |                            |        |                        |
| <b>hsa-miR-381-3p**</b>    | 0.320  | 2.406                  |                            |        |                        |
| <b>hsa-miR-134-5p*</b>     | 0.300  | 1.992                  |                            |        |                        |

| <b>B. Downregulated miRNAs</b> |               |                         |                             |               |                         |
|--------------------------------|---------------|-------------------------|-----------------------------|---------------|-------------------------|
| <b>WT-CFBE Cells</b>           | <b>Log2FC</b> | <b>-log10 (P Value)</b> | <b>F508del-CFBE Cells</b>   | <b>Log2FC</b> | <b>-log10 (P Value)</b> |
| <b>hsa-miR-548f-5p*</b>        | -1.426        | 1.982                   | <b>hsa-miR-3150b-3p****</b> | -3.919        | 4.286                   |
| <b>hsa-miR-4453****</b>        | -0.869        | 4.838                   | <b>hsa-miR-3168**</b>       | -2.704        | 2.374                   |
| <b>hsa-miR-3157-5p**</b>       | -0.723        | 2.746                   | <b>hsa-miR-1266-5p****</b>  | -2.152        | 4.383                   |
| hsa-miR-3127-5p**              | -0.692        | 2.988                   | <b>hsa-miR-505-5p***</b>    | -1.736        | 3.133                   |
| <b>hsa-miR-585-3p**</b>        | -0.632        | 2.327                   | <b>hsa-miR-6808-3p***</b>   | -1.628        | 3.984                   |
| <b>hsa-miR-934****</b>         | -0.604        | 4.873                   | <b>hsa-miR-6087**</b>       | -1.359        | 2.294                   |
| hsa-miR-328-3p**               | -0.596        | 3.445                   | <b>hsa-miR-623**</b>        | -1.095        | 2.172                   |
| hsa-miR-330-3p**               | -0.520        | 2.459                   | <b>hsa-miR-548ar-5p**</b>   | -1.046        | 2.172                   |
| hsa-miR-1180-3p***             | -0.489        | 3.529                   | <b>hsa-miR-152-5p**</b>     | -1.025        | 2.648                   |
| hsa-miR-149-5p****             | -0.466        | 4.897                   | <b>hsa-miR-625-3p**</b>     | -1.002        | 2.464                   |
| <b>hsa-miR-1301-3p**</b>       | -0.382        | 2.222                   | <b>hsa-miR-4449**</b>       | -0.987        | 2.684                   |
| hsa-miR-26b-3p*                | -0.378        | 1.800                   | hsa-miR-328-3p****          | -0.952        | 4.162                   |
| <b>hsa-miR-2110*</b>           | -0.336        | 1.886                   | <b>hsa-miR-1972**</b>       | -0.873        | 2.092                   |
| <b>hsa-miR-128-3p**</b>        | -0.301        | 2.759                   | <b>hsa-miR-4516**</b>       | -0.786        | 2.176                   |
| hsa-let-7d-3p*                 | -0.286        | 1.714                   | <b>hsa-miR-619-5p**</b>     | -0.784        | 2.601                   |
| <b>hsa-miR-30e-3p*</b>         | -0.265        | 1.627                   | <b>hsa-miR-4497*</b>        | -0.696        | 1.720                   |
|                                |               |                         | hsa-miR-3127-5p*            | -0.679        | 1.847                   |
|                                |               |                         | <b>hsa-miR-4327*</b>        | -0.674        | 1.912                   |
|                                |               |                         | hsa-let-7d-3p**             | -0.655        | 2.944                   |
|                                |               |                         | <b>hsa-miR-4746-5p*</b>     | -0.637        | 1.863                   |
|                                |               |                         | hsa-miR-330-3p**            | -0.634        | 2.332                   |
|                                |               |                         | <b>hsa-miR-296-3p**</b>     | -0.551        | 2.036                   |
|                                |               |                         | <b>hsa-miR-423-5p**</b>     | -0.512        | 2.108                   |
|                                |               |                         | hsa-miR-26b-3p**            | -0.483        | 2.011                   |
|                                |               |                         | hsa-miR-1180-3p**           | -0.444        | 2.229                   |
|                                |               |                         | hsa-miR-149-5p*             | -0.386        | 1.899                   |
|                                |               |                         | <b>hsa-miR-335-3p*</b>      | -0.356        | 1.716                   |