## **Description of Additional Supplementary Files**

Supplementary Data 1

Group comparison result for WT, P2 vs P1

Supplementary Data 2

Group comparison result for WT, P3 vs P1

Supplementary Data 3

Group comparison result for WT, P3 vs P2

Supplementary Data 4

Group comparison result for WT, P3 d6 vs d0

Supplementary Data 5

Representative differentially expressed genes between P1, P2 and P3 in each cluster as heatmap of Figure 3b

Supplementary Data 6

Summary for Geneset enrichment analysis (Figure 3b, 3d)

Supplementary Data 7

Group comparison result (P2 vs P3) for the complete list for Growth Factors, ECM and inflammation (Figure 3c)

Supplementary Data 8

Group comparison result for P1, ST2KO vs WT

Supplementary Data 9

Group comparison result for P2, ST2KO vs WT

Supplementary Data 10

Group comparison result for P3, ST2KO vs WT

Supplementary Data 11

Summary for pathway enrichment analysis P2, ST2KO vs WT (Figure 6b)

Supplementary Data 12

Summary for pathway enrichment analysis P3, ST2KO vs WT (Figure 6c)

Supplementary Data 13

Group comparison result for the complete list for Growth Factors, ECM and immune response, P2 ST2KO vs WT (Figure 6d)

Supplementary Data 14

Group comparison result for the complete list for Growth Factors, ECM and immune response, P3 ST2KO vs WT (Figure 6d)