



**ESM Fig. 5. Heat maps of regulated genes involved in key processes of  $\beta$ -cell function and ontogeny**

(A-E) Z-score heatmaps showed misregulated expression of several genes involved in cell cycle control and mitosis (A),  $K^+$  and  $Ca^{2+}$  transport (B), GTPase regulatory activity (C) cytoplasmic vesicle formation (D) and ribosome biogenesis (E).