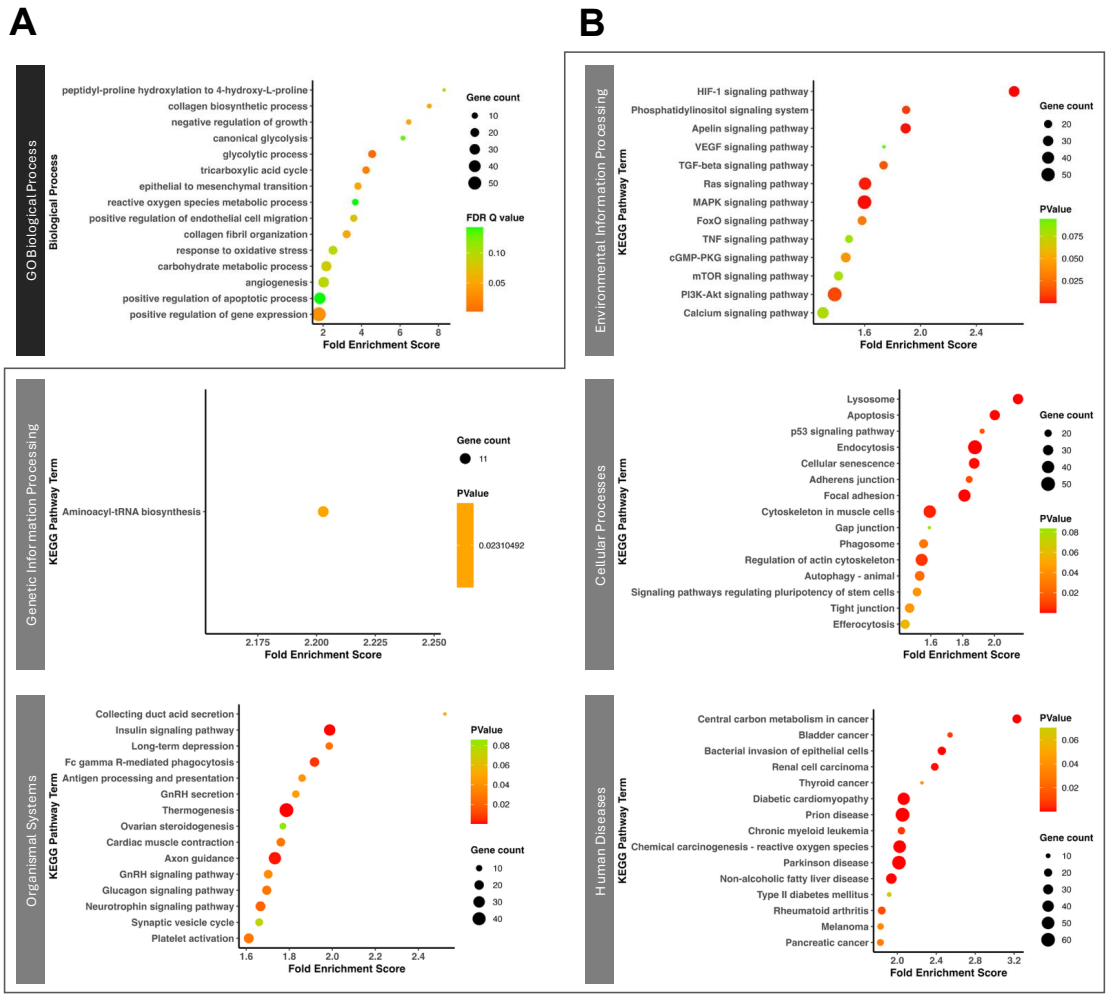



**Figure S1**

The RNA-seq of the cumulus cells. The top 15 GO terms in Biological process predicted by GO analysis (A). The GO terms were enriched by the differentially expressed genes, as indicated by the fold-enrichment score (colour scale: fold enrichment score; dot size: gene counts). The top 15 KEGG pathways analysis, which subcategories of environmental information processing, Genetic information, Cellular Processes, Organismal Systems, and Human Disease (B). The pathways were

enriched by the differentially expressed genes, as indicated by the fold-enrichment score (colour scale: fold enrichment score; dot size: gene counts).

Table S1. The list of antibodies.

| Antibody | Host | Product | Dilution ratio | Catalog_# |
|---|---|---|---|---|
| **TOMM20** | **Rabbit** | **MyBioSource** | **1:2500** | **MBS820677** |
| **GAPDH** | **Rabbit** | **proteintech** | **1:2500** | **10494-1-ap** |
| **ACTB** | **Rabbit** | **Cell Signaling** | **1:5000** | **4970S** |
| **Total OXPHOS Rodent WB Antibody Cocktail** | **Mouse** | **Abcam** | **1:1000** | **ab110413** |
| **Anti-Rabbit IgG H&L (HRP)** | **Goat** | **Abcam** | **1:5000** | **ab6721** |
| **Anti-Mouse IgG H&L (HRP)** | **Goat** | **Abcam** | **1:5000** | **ab6789** |