

**Supplementary Table 2. KEGG pathway terms enriched through GSEA**

**Enriched KEGG pathway terms by genes down-expressed in  
APBC-treated group**

| <b>KEGG Pathway Term</b>                     | <b>NES</b> | <b>FDR q-val</b> |
|----------------------------------------------|------------|------------------|
| Glycolysis / Gluconeogenesis                 | -2.3609    | <0.0001          |
| Citrate cycle (TCA cycle)                    | -2.2812    | <0.0001          |
| Starch and sucrose metabolism                | -2.2508    | <0.0001          |
| MAPK signaling pathway - yeast               | -2.2027    | 1.51E-03         |
| Carbon metabolism                            | -2.1828    | 1.20E-03         |
| Pyruvate metabolism                          | -2.1487    | 1.00E-03         |
| Carbon fixation in photosynthetic organisms  | -2.1312    | 8.60E-04         |
| Microbial metabolism in diverse environments | -2.1135    | 1.25E-03         |
| Glyoxylate and dicarboxylate metabolism      | -2.1096    | 1.11E-03         |
| Propanoate metabolism                        | -2.0123    | 2.96E-03         |
| Fructose and mannose metabolism              | -1.8614    | 1.24E-02         |
| Biosynthesis of antibiotics                  | -1.8493    | 1.38E-02         |
| 2-Oxocarboxylic acid metabolism              | -1.8457    | 1.33E-02         |
| Galactose metabolism                         | -1.8083    | 1.60E-02         |
| Fat digestion and absorption                 | -1.7815    | 1.90E-02         |
| Biosynthesis of amino acids                  | -1.7772    | 1.85E-02         |
| Hippo signaling pathway - multiple species   | -1.7246    | 2.75E-02         |
| Glucagon signaling pathway                   | -1.7157    | 2.80E-02         |
| AMPK signaling pathway                       | -1.7133    | 2.72E-02         |
| Hippo signaling pathway - fly                | -1.6970    | 3.05E-02         |
| Biosynthesis of secondary metabolites        | -1.6923    | 3.01E-02         |
| Drug metabolism - cytochrome P450            | -1.6592    | 3.79E-02         |

**Enriched KEGG pathway terms by genes up-expressed in  
APBC-treated group**

| <b>KEGG Pathway Term</b>                     | <b>NES</b> | <b>FDR q-val</b> |
|----------------------------------------------|------------|------------------|
| Antigen processing and presentation          | 2.3567     | <0.0001          |
| TNF signaling pathway                        | 2.0654     | <0.0001          |
| Intestinal immune network for IgA production | 2.0467     | 1.91E-04         |
| Ribosome biogenesis in eukaryotes            | 2.0304     | 2.87E-04         |
| NOD-like receptor signaling pathway          | 1.9847     | 8.54E-04         |
| DNA replication                              | 1.9705     | 7.12E-04         |
| Th17 cell differentiation                    | 1.8540     | 4.40E-03         |
| Cytokine-cytokine receptor interaction       | 1.8476     | 4.38E-03         |
| Proteasome                                   | 1.8242     | 5.17E-03         |
| Cell cycle - yeast                           | 1.8070     | 6.05E-03         |
| Cytosolic DNA-sensing pathway                | 1.8054     | 5.71E-03         |
| Phagosome                                    | 1.7748     | 7.82E-03         |
| Th1 and Th2 cell differentiation             | 1.7592     | 8.77E-03         |
| Homologous recombination                     | 1.7336     | 1.10E-02         |
| C-type lectin receptor signaling pathway     | 1.7164     | 1.33E-02         |
| Aminoacyl-tRNA biosynthesis                  | 1.7152     | 1.26E-02         |
| Spliceosome                                  | 1.7102     | 1.24E-02         |
| Cell adhesion molecules (CAMs)               | 1.7094     | 1.19E-02         |
| RNA transport                                | 1.6819     | 1.56E-02         |
| IL-17 signaling pathway                      | 1.6551     | 2.00E-02         |
| Toll-like receptor signaling pathway         | 1.6096     | 3.01E-02         |
| Hematopoietic cell lineage                   | 1.6078     | 2.93E-02         |
| NF-kappa B signaling pathway                 | 1.5700     | 4.18E-02         |
| Fanconi anemia pathway                       | 1.5531     | 4.72E-02         |