**Table S2.** Hallmark and KEGG pathways enrichment of WGCNA modules.

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| **Hallmark gene set** | **Module** | **Q-valueb** |
| G2M\_CHECKPOINT | black | 3.10E-04 |
| APICAL\_JUNCTION | blue | 3.78E-03 |
| EPITHELIAL\_MESENCHYMAL\_TRANSITION | blue | 1.80E-18 |
| MYOGENESIS | blue | 5.16E-07 |
| UV\_RESPONSE\_DN  | blue | 1.25E-04 |
| E2F\_TARGETS | brown | 6.02E-42 |
| G2M\_CHECKPOINT | brown | 1.34E-28 |
| MITOTIC\_SPINDLE | brown | 3.21E-04 |
| MYC\_TARGETS\_V1 | brown | 2.74E-03 |
| SPERMATOGENESIS  | brown | 1.86E-03 |
| ALLOGRAFT\_REJECTION  | greenyellow | 1.12E-16 |
| COMPLEMENT | greenyellow | 1.12E-06 |
| INFLAMMATORY\_RESPONSE | greenyellow | 1.49E-10 |
| INTERFERON\_ALPHA\_RESPONSE | greenyellow | 1.97E-13 |
| INTERFERON\_GAMMA\_RESPONSE | greenyellow | 9.37E-18 |
| KRAS\_SIGNALING\_UP | greenyellow | 3.13E-06 |
| EPITHELIAL\_MESENCHYMAL\_TRANSITION | lightcyan | 1.53E-04 |
| ADIPOGENESIS | lightgreen | 4.47E-04 |
| MYC\_TARGETS\_V1 | lightgreen | 5.78E-08 |
| OXIDATIVE\_PHOSPHORYLATION | lightgreen | 5.08E-28 |
| ESTROGEN\_RESPONSE\_EARLY | tana | 1.69E-03 |
| GLYCOLYSIS  | tana | 6.74E-05 |
| HYPOXIA | tana | 8.28E-11 |
| MTORC1\_SIGNALING | tana | 3.88E-04 |

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| --- | --- | --- |
| **KEGG gene set** | **Module** | **Q-value** |
| SPLICEOSOME | black | 2.63E-03 |
| ECM\_RECEPTOR\_INTERACTION | blue | 2.66E-06 |
| FOCAL\_ADHESION | blue | 4.53E-05 |
| VASCULAR\_SMOOTH\_MUSCLE\_CONTRACTION | blue | 5.52E-05 |
| GAP\_JUNCTION | blue | 9.18E-04 |
| CELL\_CYCLE | brown | 2.85E-11 |
| SYSTEMIC\_LUPUS\_ERYTHEMATOSUS | brown | 2.00E-08 |
| DNA\_REPLICATION | brown | 2.32E-07 |
| OOCYTE\_MEIOSIS | brown | 5.99E-04 |
| CYTOKINE\_CYTOKINE\_RECEPTOR\_INTERACTION | greenyellow | 2.19E-04 |
| NATURAL\_KILLER\_CELL\_MEDIATED\_CYTOTOXICITY | greenyellow | 4.40E-09 |
| LEISHMANIA\_INFECTION | greenyellow | 4.50E-09 |
| VIRAL\_MYOCARDITIS | greenyellow | 1.50E-06 |
| CHEMOKINE\_SIGNALING\_PATHWAY | greenyellow | 8.15E-06 |
| LEUKOCYTE\_TRANSENDOTHELIAL\_MIGRATION | greenyellow | 1.79E-05 |
| ALLOGRAFT\_REJECTION | greenyellow | 4.90E-05 |
| CELL\_ADHESION\_MOLECULES\_CAMS | greenyellow | 6.03E-05 |
| TOLL\_LIKE\_RECEPTOR\_SIGNALING\_PATHWAY | greenyellow | 6.48E-05 |
| AUTOIMMUNE\_THYROID\_DISEASE | greenyellow | 6.99E-05 |
| INTESTINAL\_IMMUNE\_NETWORK\_FOR\_IGA\_PRODUCTION | greenyellow | 6.99E-05 |
| FC\_GAMMA\_R\_MEDIATED\_PHAGOCYTOSIS | greenyellow | 6.99E-05 |
| GRAFT\_VERSUS\_HOST\_DISEASE | greenyellow | 5.79E-04 |
| FC\_EPSILON\_RI\_SIGNALING\_PATHWAY | greenyellow | 6.61E-04 |
| ASTHMA | greenyellow | 9.81E-04 |
| TYPE\_I\_DIABETES\_MELLITUS | greenyellow | 1.15E-03 |
| COMPLEMENT\_AND\_COAGULATION\_CASCADES | greenyellow | 1.76E-03 |
| SYSTEMIC\_LUPUS\_ERYTHEMATOSUS | greenyellow  | 8.74E-04 |
| TERPENOID\_BACKBONE\_BIOSYNTHESIS | grey | 3.11E-03 |
| SPLICEOSOME | grey60 | 8.50E-03 |
| RIBOSOME | lightgreen | 2.89E-34 |
| PARKINSONS\_DISEASE  | lightgreen | 1.11E-24 |
| HUNTINGTONS\_DISEASE | lightgreen | 1.71E-22 |
| OXIDATIVE\_PHOSPHORYLATION | lightgreen | 5.54E-20 |
| ALZHEIMERS\_DISEASE | lightgreen | 2.11E-18 |
| PROTEASOME | lightgreen | 8.04E-09 |
| CARDIAC\_MUSCLE\_CONTRACTION | lightgreen | 5.76E-08 |
| N\_GLYCAN\_BIOSYNTHESIS | red | 1.05E-09 |
| LYSOSOME | red | 3.72E-03 |
| GLYCOLYSIS\_GLUCONEOGENESIS | tana | 1.25E-03 |
| SPLICEOSOME | turquoise  | 2.84E-03 |

aPreeclampsia correlated module

**b**Q-value is the False Discovery Rate