**Table S1**. Functional Enrichment Results Using KEGG pathways for Module Genes

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| --- | --- | --- | --- | --- | --- |
| **KEGG** | **Na** | **Ob** | ***P*** | ***P*empc** | ***P*BHd** |
| hsa04530: Tight junction | 134 | 14 | 7.40×10-6 | 0.001 | 8.07×10-4 |
| hsa04330: Notch signaling pathway | 47 | 8 | 2.31×10-5 | 0.001 | 1.26×10-3 |
| hsa05213: Endometrial cancer | 52 | 8 | 4.97×10-5 | 0.001 | 1.81×10-3 |
| hsa04520: Adherens junction | 75 | 9 | 1.24×10-4 | 0.001 | 3.37×10-3 |
| hsa05100: Bacterial invasion of epithelial cells | 73 | 8 | 5.64×10-4 | 0.003 | 0.012 |
| hsa05412: Arrhythmogenic right ventricular cardiomyopathy (ARVC) | 76 | 8 | 7.41×10-4 | 0.001 | 0.013 |
| hsa05215: Prostate cancer | 89 | 8 | 2.10×10-3 | 0.002 | 0.026 |
| hsa04720: Long-term potentiation | 70 | 7 | 2.17×10-3 | 0.004 | 0.026 |
| hsa05211: Renal cell carcinoma | 70 | 7 | 2.17×10-3 | 0.003 | 0.026 |
| hsa04270: Vascular smooth muscle contraction | 116 | 9 | 3.09×10-6 | 0.001 | 0.034 |

aThe total number of genes in the pathway.
bThe number of module genes observed in the pathway.
cThe empirical P value of the pathway (see text).
d*P* values adjusted by Benjamini & Hochberg (BH) method [1].

Reference

1. Benjamini Y, Hochberg Y (1995) Controlling the false discovery rate: a practical and powerful approach to multiple testing. J Roy Statist Soc Ser B 57: 289-300.