**Supplementary Table** **6**.Analysis of Metformin metabolic pathway enrichment

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Pathway Name | Match Status | -log(p) | Holm p | FDR | Impact | Details |
| Fatty acid biosynthesis | 1/47 | 4.8527 | 3.6499E-4 | 2.4636E-4 | 0.0 | KEGG SMP |
| Glycine, serine and threonine metabolism | 1/34 | 4.6184 | 6.0186E-4 | 2.4636E-4 | 0.0 | KEGG SMP |
| Glycolysis / Gluconeogenesis | 2/26 | 4.5463 | 6.8222E-4 | 2.4636E-4 | 0.04443 | KEGG SMP SMP |
| Biosynthesis of unsaturated fatty acids | 1/36 | 2.6078 | 0.056741 | 0.016035 | 0.0 | KEGG |
| Glycerolipid metabolism | 1/16 | 2.178 | 0.14602 | 0.028761 | 0.01246 | KEGG SMP |
| Phosphatidylinositol signaling system | 1/28 | 2.178 | 0.14602 | 0.028761 | 0.00152 | KEGG |
| Steroid hormone biosynthesis | 4/77 | 1.8829 | 0.26189 | 0.048636 | 0.02841 | KEGG |
| Citrate cycle (TCA cycle) | 1/20 | 1.6393 | 0.43602 | 0.054241 | 0.03273 | KEGG |
| Alanine, aspartate and glutamate metabolism | 1/28 | 1.6393 | 0.43602 | 0.054241 | 0.0 | KEGG SMP |
| Propanoate metabolism | 1/23 | 1.6393 | 0.43602 | 0.054241 | 0.0 | KEGG SMP |
| Butanoate metabolism | 1/15 | 1.6393 | 0.43602 | 0.054241 | 0.0 | KEGG |
| Purine metabolism | 2/66 | 1.2166 | 0.91088 | 0.13157 | 0.07491 | KEGG SMP |
| Starch and sucrose metabolism | 1/15 | 1.1737 | 0.93857 | 0.13408 | 0.0 | KEGG SMP |
| Folate biosynthesis | 1/27 | 1.0398 | 1.0 | 0.16946 | 0.0 | KEGG |
| Sphingolipid metabolism | 3/21 | 0.86849 | 1.0 | 0.23463 | 0.26978 | KEGG SMP |
| Arginine and proline metabolism | 1/38 | 0.83888 | 1.0 | 0.23549 | 0.0 | KEGG SMP |
| Caffeine metabolism | 1/12 | 0.68523 | 1.0 | 0.31571 | 0.0 | KEGG SMP |
| Glycerophospholipid metabolism | 3/36 | 0.61614 | 1.0 | 0.34959 | 0.33882 | KEGG |
| Linoleic acid metabolism | 2/5 | 0.55501 | 1.0 | 0.38125 | 0.0 | KEGG |
| Arachidonic acid metabolism | 5/36 | 0.52181 | 1.0 | 0.39096 | 0.0636 | KEGG SMP |
| alpha-Linolenic acid metabolism | 1/13 | 0.47896 | 1.0 | 0.41096 | 0.0 | KEGG |
| Pyrimidine metabolism | 2/39 | 0.34187 | 1.0 | 0.53787 | 0.19576 | KEGG SMP |
| Primary bile acid biosynthesis | 1/46 | 0.28245 | 1.0 | 0.58992 | 0.0 | KEGG SMP |
| Glycosylphosphatidylinositol (GPI)-anchor biosynthesis | 1/14 | 0.10069 | 1.0 | 0.85916 | 0.00399 | KEGG |
| Retinol metabolism | 1/16 | 0.067713 | 1.0 | 0.88986 | 0.0 | KEGG SMP |
| N-Glycan biosynthesis | 1/41 | 0.0040888 | 1.0 | 0.99063 | 0.0 | KEGG |