

## S7 Table. KEGG pathways

| <b>Divergent up</b>              | <b>Count</b> | <b>%</b> | <b>P-Value</b> | <b>Benjamini</b> |
|----------------------------------|--------------|----------|----------------|------------------|
| Regulation of actin cytoskeleton | 13           | 6.2      | 3.40E-05       | 3.50E-03         |
| Focal adhesion                   | 12           | 5.7      | 7.20E-05       | 3.70E-03         |
| Melanoma                         | 7            | 3.3      | 4.00E-04       | 1.30E-02         |
| MAPK signaling pathway           | 12           | 5.7      | 9.10E-04       | 2.30E-02         |
| Renal cell carcinoma             | 6            | 2.8      | 2.60E-03       | 5.30E-02         |
| Prostate cancer                  | 6            | 2.8      | 7.70E-03       | 1.20E-01         |
| Glioma                           | 5            | 2.4      | 1.10E-02       | 1.50E-01         |
| Pathways in cancer               | 11           | 5.2      | 1.30E-02       | 1.50E-01         |
| Pancreatic cancer                | 5            | 2.4      | 1.70E-02       | 1.80E-01         |
| Bladder cancer                   | 4            | 1.9      | 2.00E-02       | 1.80E-01         |

| <b>Convergent up</b>                    | <b>Count</b> | <b>%</b> | <b>P-Value</b> | <b>Benjamini</b> |
|---|--------------|----------|----------------|------------------|
| DNA replication                         | 7            | 3        | 3.80E-06       | 3.30E-04         |
| Spliceosome                             | 10           | 4.2      | 2.10E-05       | 8.80E-04         |
| Cell cycle                              | 10           | 4.2      | 2.70E-05       | 7.60E-04         |
| Oocyte meiosis                          | 8            | 3.4      | 5.40E-04       | 1.10E-02         |
| RNA degradation                         | 6            | 2.5      | 8.60E-04       | 1.50E-02         |
| Nucleotide excision repair              | 5            | 2.1      | 1.90E-03       | 2.70E-02         |
| Mismatch repair                         | 4            | 1.7      | 2.50E-03       | 2.90E-02         |
| Progesterone-mediated oocyte maturation | 6            | 2.5      | 4.10E-03       | 4.20E-02         |
| Homologous recombination                | 4            | 1.7      | 4.50E-03       | 4.10E-02         |
| Neurotrophin signaling pathway          | 6            | 2.5      | 2.30E-02       | 1.80E-01         |

| <b>Resistant up</b>         | <b>Count</b> | <b>%</b> | <b>P-Value</b> | <b>Benjamini</b> |
|-----------------------------|--------------|----------|----------------|------------------|
| DNA replication             | 11           | 1.1      | 1.30E-05       | 2.00E-03         |
| Spliceosome                 | 21           | 2.2      | 1.30E-05       | 1.00E-03         |
| Pyrimidine metabolism       | 16           | 1.6      | 2.30E-04       | 1.20E-02         |
| Nucleotide excision repair  | 10           | 1        | 4.80E-04       | 1.80E-02         |
| Ribosome                    | 14           | 1.4      | 1.20E-03       | 3.50E-02         |
| Basal transcription factors | 8            | 0.8      | 1.90E-03       | 4.70E-02         |
| Purine metabolism           | 19           | 1.9      | 2.60E-03       | 5.50E-02         |
| Base excision repair        | 8            | 0.8      | 5.90E-03       | 1.10E-01         |
| Mismatch repair             | 6            | 0.6      | 6.20E-03       | 1.00E-01         |
| Selenoamino acid metabolism | 6            | 0.6      | 7.60E-03       | 1.10E-01         |

| <b>Divergent down</b>                       | <b>Count</b> | <b>%</b> | <b>P-Value</b> | <b>Benjamini</b> |
|---|--------------|----------|----------------|------------------|
| Leukocyte transendothelial migration        | 6            | 5.3      | 3.50E-03       | 2.70E-01         |
| Alanine, aspartate and glutamate metabolism | 3            | 2.7      | 2.80E-02       | 7.10E-01         |

| <b>Convergent down</b>                       | <b>Count</b> | <b>%</b> | <b>P-Value</b> | <b>Benjamini</b> |
|--|--------------|----------|----------------|------------------|
| Lysosome                                     | 16           | 3.9      | 1.70E-07       | 2.30E-05         |
| Metabolism of xenobiotics by cytochrome P450 | 8            | 2        | 1.10E-03       | 7.00E-02         |
| Glycosaminoglycan degradation                | 5            | 1.2      | 2.20E-03       | 9.10E-02         |
| Focal adhesion                               | 13           | 3.2      | 3.50E-03       | 1.10E-01         |
| ECM-receptor interaction                     | 8            | 2        | 4.20E-03       | 1.00E-01         |
| Other glycan degradation                     | 4            | 1        | 6.60E-03       | 1.30E-01         |
| Cytokine-cytokine receptor interaction       | 14           | 3.4      | 7.10E-03       | 1.20E-01         |
| Glutathione metabolism                       | 6            | 1.5      | 8.80E-03       | 1.30E-01         |
| Drug metabolism                              | 7            | 1.7      | 1.00E-02       | 1.40E-01         |
| Toll-like receptor signaling pathway         | 8            | 2        | 1.10E-02       | 1.30E-01         |

| <b>Resistant down</b>             | <b>Count</b> | <b>%</b> | <b>P-Value</b> | <b>Benjamini</b> |
|-----------------------------------|--------------|----------|----------------|------------------|
| Focal adhesion                    | 26           | 3.4      | 2.40E-07       | 3.60E-05         |
| Lysosome                          | 16           | 2.1      | 7.00E-05       | 5.20E-03         |
| Apoptosis                         | 13           | 1.7      | 1.60E-04       | 7.80E-03         |
| ECM-receptor interaction          | 12           | 1.5      | 4.30E-04       | 1.60E-02         |
| TGF-beta signaling pathway        | 11           | 1.4      | 2.30E-03       | 6.70E-02         |
| Chronic myeloid leukemia          | 10           | 1.3      | 3.10E-03       | 7.40E-02         |
| Dilated cardiomyopathy            | 11           | 1.4      | 3.50E-03       | 7.20E-02         |
| Hypertrophic cardiomyopathy (HCM) | 10           | 1.3      | 6.10E-03       | 1.10E-01         |
| Pancreatic cancer                 | 9            | 1.2      | 7.70E-03       | 1.20E-01         |
| N-Glycan biosynthesis             | 7            | 0.9      | 9.50E-03       | 1.30E-01         |