**Supplementary Table 2: Signature genes involved in each of four Wnt pathway branches (Wnt/β-catenin, Wnt/Ca2+, Wnt/PCP and Wnt/PCP regulation)**

| Wnt/Ca2+                              | Canonical Wnt/β-catenin                  | Wnt/PCP                         | Wnt/PCP regulation                           |
|---------------------------------------|-----------------------------------------|---------------------------------|---------------------------------------------|
| Ca2+_pathway_Reactome                 | Canonical_Wnt_signal_NCI                | PCP_CE_pathway_Reactome         | GO_REGULATION_OF_WNT_SIGNALING_PATHWAY_PLANAR_CELL_POLARITY_PATHWAY |
| > Ca2+ pathway                       | > Canonical Wnt signaling pathway       | > PCP/CE pathway                | > Any process that modulates the frequency, rate or extent of Wnt signaling pathway, planar cell polarity pathway. [GOC:BHF] |
| [http://identifiers.org/reactome/R-HSA-4086398]; datasource: reactome; organism: 9606; idtype: hgnc symbol | [http://pathwaycommons.org/pc12/Pathway_c80f0022b93ffbc95f93ebca756170b]; datasource: pid; organism: 9606; idtype: hgnc symbol | [http://identifiers.org/reactome/R-HSA-4086400]; datasource: reactome; organism: 9606; idtype: hgnc symbol |

| AGO1       | GNG11 | PDE6B | APC    | DAAM1 | ABL1    |
| AGO2       | GNG12 | PDE6G | AXIN1  | DVL1   | ANKRD6  |
| AGO3       | GNG13 | PLCB1 | CAV1   | DVL2   | DAB2    |
| AGO4       | GNG2  | PLCB2 | CSNK1G1| DVL3   | DACT1   |
| AXIN2      | GNG3  | PLCB3 | CTNNB1 | FZD1   | DKK1    |
| CALM1      | GNG4  | PPP3CA| CUL3   | FZD3   | GPC3    |
| CAMK2A     | GNG5  | PPP3CB| DVL1   | FZD6   | MKS1    |
| CTNNB1     | GNG7  | PPP3R1| DVL2   | FZD7   | MLLT3   |
| FZD2       | GNG8  | PRKCA | DVL3   | PFN1   | NKD1    |
| FZD3       | GNGT1 | PRKG1 | FZD5   | RAC1   | NPHP3   |
| FZD4       | GNT2  | PRKG2 | GRK5   | RAC2   | PLEKHA4 |
| FZD5       | ITPR1 | TCF7  | GSK3A  | RAC3   | RSPO3   |
| FZD6       | ITPR2 | TCF7L1| GSK3B  | RHOA   | SFRP1   |
| GNAO1      | ITPR3 | TCF7L2| KLHL12 | ROR2   | SFRP2   |
| GNAT2      | LEF1  | TNRC6A| LRP6   | RYK    | ZNRF3   |
| GNB1       | MAP3K7| TNRC6B| NKD2   | VANGL2 |         |
| GNB2       | MOV10 | TNRC6C| PI4K2A | WNT1   |         |
| GNB3       | MYC   | WNT11 | PIP5K1B| WNT11  |         |
| GNB4       | NFATC1| WNT5A | PPP2R5A| WNT4   |         |
| GNB5       | NLK   | RANBP3| WNT5A  |        |         |
| GNG10      | PDE6A | WNT3A | WNT5B  |        |         |