Table: GSEA Results Summary

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| --- | --- |
|  |  |
| Dataset | means\_all\_collapsed\_to\_symbols.labels.cls#triple\_means\_peak |
| Phenotype | labels.cls#triple\_means\_peak |
| Upregulated in class | triple\_means\_peak\_neg |
| GeneSet | GOBP\_CANONICAL\_WNT\_SIGNALING\_PATHWAY |
| Enrichment Score (ES) | -0.5858085 |
| Normalized Enrichment Score (NES) | -2.1752713 |
| Nominal p-value | 0.0 |
| FDR q-value | 0.006668875 |
| FWER p-Value | 0.007 |



Fig 1: Enrichment plot: GOBP\_CANONICAL\_WNT\_SIGNALING\_PATHWAY

Profile of the Running ES Score & Positions of GeneSet Members on the Rank Ordered List

Table: GSEA details [[plain text format]](http://docs.google.com/GOBP_CANONICAL_WNT_SIGNALING_PATHWAY.tsv)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | SYMBOL | TITLE | RANK IN GENE LIST | RANK METRIC SCORE | RUNNING ES | CORE ENRICHMENT |
| 1 | [SHISA3](https://ensembl.org/Search/Results?q=SHISA3) | shisa family member 3 [Source:HGNC Symbol;Acc:HGNC:25159] | 0 | 0.635 | 0.0511 | No |
| 2 | [DKK4](https://ensembl.org/Search/Results?q=DKK4) | dickkopf WNT signaling pathway inhibitor 4 [Source:HGNC Symbol;Acc:HGNC:2894] | 294 | 0.121 | -0.1386 | No |
| 3 | [ISL1](https://ensembl.org/Search/Results?q=ISL1) | ISL LIM homeobox 1 [Source:HGNC Symbol;Acc:HGNC:6132] | 318 | 0.108 | -0.1456 | No |
| 4 | [TLE5](https://ensembl.org/Search/Results?q=TLE5) | "TLE family member 5, transcriptional modulator [Source:HGNC Symbol;Acc:HGNC:307]" | 449 | 0.021 | -0.2324 | No |
| 5 | [PSME2](https://ensembl.org/Search/Results?q=PSME2) | proteasome activator subunit 2 [Source:HGNC Symbol;Acc:HGNC:9569] | 458 | 0.017 | -0.2365 | No |
| 6 | [TMEM131L](https://ensembl.org/Search/Results?q=TMEM131L) | transmembrane 131 like [Source:HGNC Symbol;Acc:HGNC:29146] | 480 | 0.009 | -0.2501 | No |
| 7 | [EGR1](https://ensembl.org/Search/Results?q=EGR1) | early growth response 1 [Source:HGNC Symbol;Acc:HGNC:3238] | 597 | -0.053 | -0.3248 | No |
| 8 | [DKK2](https://ensembl.org/Search/Results?q=DKK2) | dickkopf WNT signaling pathway inhibitor 2 [Source:HGNC Symbol;Acc:HGNC:2892] | 622 | -0.065 | -0.3359 | No |
| 9 | [FGFR2](https://ensembl.org/Search/Results?q=FGFR2) | fibroblast growth factor receptor 2 [Source:HGNC Symbol;Acc:HGNC:3689] | 670 | -0.090 | -0.3607 | No |
| 10 | [SOX4](https://ensembl.org/Search/Results?q=SOX4) | SRY-box transcription factor 4 [Source:HGNC Symbol;Acc:HGNC:11200] | 685 | -0.099 | -0.3622 | No |
| 11 | [PSMB8](https://ensembl.org/Search/Results?q=PSMB8) | proteasome 20S subunit beta 8 [Source:HGNC Symbol;Acc:HGNC:9545] | 690 | -0.101 | -0.3568 | No |
| 12 | [CAV1](https://ensembl.org/Search/Results?q=CAV1) | caveolin 1 [Source:HGNC Symbol;Acc:HGNC:1527] | 694 | -0.103 | -0.3505 | No |
| 13 | [RBMS3](https://ensembl.org/Search/Results?q=RBMS3) | RNA binding motif single stranded interacting protein 3 [Source:HGNC Symbol;Acc:HGNC:13427] | 701 | -0.105 | -0.3461 | No |
| 14 | [GPC3](https://ensembl.org/Search/Results?q=GPC3) | glypican 3 [Source:HGNC Symbol;Acc:HGNC:4451] | 884 | -0.207 | -0.4534 | No |
| 15 | [DKK1](https://ensembl.org/Search/Results?q=DKK1) | dickkopf WNT signaling pathway inhibitor 1 [Source:HGNC Symbol;Acc:HGNC:2891] | 923 | -0.230 | -0.4607 | No |
| 16 | [HHEX](https://ensembl.org/Search/Results?q=HHEX) | hematopoietically expressed homeobox [Source:HGNC Symbol;Acc:HGNC:4901] | 966 | -0.252 | -0.4691 | No |
| 17 | [SOX10](https://ensembl.org/Search/Results?q=SOX10) | SRY-box transcription factor 10 [Source:HGNC Symbol;Acc:HGNC:11190] | 1018 | -0.275 | -0.4817 | No |
| 18 | [SOX17](https://ensembl.org/Search/Results?q=SOX17) | SRY-box transcription factor 17 [Source:HGNC Symbol;Acc:HGNC:18122] | 1172 | -0.302 | -0.5616 | Yes |
| 19 | [WNT1](https://ensembl.org/Search/Results?q=WNT1) | Wnt family member 1 [Source:HGNC Symbol;Acc:HGNC:12774] | 1185 | -0.303 | -0.5453 | Yes |
| 20 | [ARNTL](https://ensembl.org/Search/Results?q=ARNTL) | aryl hydrocarbon receptor nuclear translocator like [Source:HGNC Symbol;Acc:HGNC:701] | 1211 | -0.312 | -0.5372 | Yes |
| 21 | [WNT6](https://ensembl.org/Search/Results?q=WNT6) | Wnt family member 6 [Source:HGNC Symbol;Acc:HGNC:12785] | 1238 | -0.320 | -0.5291 | Yes |
| 22 | [SFRP1](https://ensembl.org/Search/Results?q=SFRP1) | secreted frizzled related protein 1 [Source:HGNC Symbol;Acc:HGNC:10776] | 1257 | -0.330 | -0.5149 | Yes |
| 23 | [IGFBP6](https://ensembl.org/Search/Results?q=IGFBP6) | insulin like growth factor binding protein 6 [Source:HGNC Symbol;Acc:HGNC:5475] | 1266 | -0.332 | -0.4936 | Yes |
| 24 | [APOE](https://ensembl.org/Search/Results?q=APOE) | apolipoprotein E [Source:HGNC Symbol;Acc:HGNC:613] | 1283 | -0.338 | -0.4773 | Yes |
| 25 | [RSPO3](https://ensembl.org/Search/Results?q=RSPO3) | R-spondin 3 [Source:HGNC Symbol;Acc:HGNC:20866] | 1299 | -0.345 | -0.4598 | Yes |
| 26 | [MDK](https://ensembl.org/Search/Results?q=MDK) | midkine [Source:HGNC Symbol;Acc:HGNC:6972] | 1312 | -0.353 | -0.4395 | Yes |
| 27 | [SFRP2](https://ensembl.org/Search/Results?q=SFRP2) | secreted frizzled related protein 2 [Source:HGNC Symbol;Acc:HGNC:10777] | 1337 | -0.366 | -0.4265 | Yes |
| 28 | [COL1A1](https://ensembl.org/Search/Results?q=COL1A1) | collagen type I alpha 1 chain [Source:HGNC Symbol;Acc:HGNC:2197] | 1381 | -0.386 | -0.4246 | Yes |
| 29 | [SOSTDC1](https://ensembl.org/Search/Results?q=SOSTDC1) | sclerostin domain containing 1 [Source:HGNC Symbol;Acc:HGNC:21748] | 1405 | -0.405 | -0.4077 | Yes |
| 30 | [NOTUM](https://ensembl.org/Search/Results?q=NOTUM) | "notum, palmitoleoyl-protein carboxylesterase [Source:HGNC Symbol;Acc:HGNC:27106]" | 1406 | -0.406 | -0.3751 | Yes |
| 31 | [CTHRC1](https://ensembl.org/Search/Results?q=CTHRC1) | collagen triple helix repeat containing 1 [Source:HGNC Symbol;Acc:HGNC:18831] | 1419 | -0.415 | -0.3498 | Yes |
| 32 | [IGFBP2](https://ensembl.org/Search/Results?q=IGFBP2) | insulin like growth factor binding protein 2 [Source:HGNC Symbol;Acc:HGNC:5471] | 1424 | -0.420 | -0.3188 | Yes |
| 33 | [FOLR1](https://ensembl.org/Search/Results?q=FOLR1) | folate receptor alpha [Source:HGNC Symbol;Acc:HGNC:3791] | 1431 | -0.427 | -0.2885 | Yes |
| 34 | [SFRP5](https://ensembl.org/Search/Results?q=SFRP5) | secreted frizzled related protein 5 [Source:HGNC Symbol;Acc:HGNC:10779] | 1441 | -0.436 | -0.2596 | Yes |
| 35 | [RSPO1](https://ensembl.org/Search/Results?q=RSPO1) | R-spondin 1 [Source:HGNC Symbol;Acc:HGNC:21679] | 1474 | -0.486 | -0.2423 | Yes |
| 36 | [NKD1](https://ensembl.org/Search/Results?q=NKD1) | NKD inhibitor of WNT signaling pathway 1 [Source:HGNC Symbol;Acc:HGNC:17045] | 1480 | -0.494 | -0.2059 | Yes |
| 37 | [DDIT3](https://ensembl.org/Search/Results?q=DDIT3) | DNA damage inducible transcript 3 [Source:HGNC Symbol;Acc:HGNC:2726] | 1489 | -0.510 | -0.1703 | Yes |
| 38 | [SFRP4](https://ensembl.org/Search/Results?q=SFRP4) | secreted frizzled related protein 4 [Source:HGNC Symbol;Acc:HGNC:10778] | 1490 | -0.515 | -0.1289 | Yes |
| 39 | [DKKL1](https://ensembl.org/Search/Results?q=DKKL1) | dickkopf like acrosomal protein 1 [Source:HGNC Symbol;Acc:HGNC:16528] | 1493 | -0.532 | -0.0875 | Yes |
| 40 | [BAMBI](https://ensembl.org/Search/Results?q=BAMBI) | BMP and activin membrane bound inhibitor [Source:HGNC Symbol;Acc:HGNC:30251] | 1496 | -0.546 | -0.0449 | Yes |
| 41 | [IGFBP4](https://ensembl.org/Search/Results?q=IGFBP4) | insulin like growth factor binding protein 4 [Source:HGNC Symbol;Acc:HGNC:5473] | 1505 | -0.660 | 0.0027 | Yes |



Fig 2: GOBP\_CANONICAL\_WNT\_SIGNALING\_PATHWAY

Blue-Pink O' Gram in the Space of the Analyzed GeneSet



Fig 3: GOBP\_CANONICAL\_WNT\_SIGNALING\_PATHWAY: Random ES distribution

Gene set null distribution of ES for **GOBP\_CANONICAL\_WNT\_SIGNALING\_PATHWAY**