Table: GSEA Results Summary

|  |  |
| --- | --- |
|  |  |
| Dataset | means\_all\_collapsed\_to\_symbols.labels.cls#triple\_means\_peak |
| Phenotype | labels.cls#triple\_means\_peak |
| Upregulated in class | triple\_means\_peak\_pos |
| GeneSet | GOBP\_RESPONSE\_TO\_XENOBIOTIC\_STIMULUS |
| Enrichment Score (ES) | 0.7198394 |
| Normalized Enrichment Score (NES) | 2.7792208 |
| Nominal p-value | 0.0 |
| FDR q-value | 1.633721E-4 |
| FWER p-Value | 0.001 |



Fig 1: Enrichment plot: GOBP\_RESPONSE\_TO\_XENOBIOTIC\_STIMULUS

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_RESPONSE_TO_XENOBIOTIC_STIMULUS.tsv)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | SYMBOL | TITLE | RANK IN GENE LIST | RANK METRIC SCORE | RUNNING ES | CORE ENRICHMENT |
| 1 | [ALDH3A1](https://ensembl.org/Search/Results?q=ALDH3A1) | aldehyde dehydrogenase 3 family member A1 [Source:HGNC Symbol;Acc:HGNC:405] | 3 | 0.561 | 0.0897 | Yes |
| 2 | [MGST1](https://ensembl.org/Search/Results?q=MGST1) | microsomal glutathione S-transferase 1 [Source:HGNC Symbol;Acc:HGNC:7061] | 7 | 0.510 | 0.1710 | Yes |
| 3 | [UGT1A1](https://ensembl.org/Search/Results?q=UGT1A1) | UDP glucuronosyltransferase family 1 member A1 [Source:HGNC Symbol;Acc:HGNC:12530] | 56 | 0.372 | 0.1997 | Yes |
| 4 | [UGT1A3](https://ensembl.org/Search/Results?q=UGT1A3) | UDP glucuronosyltransferase family 1 member A3 [Source:HGNC Symbol;Acc:HGNC:12535] | 57 | 0.372 | 0.2606 | Yes |
| 5 | [UGT1A4](https://ensembl.org/Search/Results?q=UGT1A4) | UDP glucuronosyltransferase family 1 member A4 [Source:HGNC Symbol;Acc:HGNC:12536] | 58 | 0.371 | 0.3212 | Yes |
| 6 | [UGT1A6](https://ensembl.org/Search/Results?q=UGT1A6) | UDP glucuronosyltransferase family 1 member A6 [Source:HGNC Symbol;Acc:HGNC:12538] | 59 | 0.371 | 0.3818 | Yes |
| 7 | [UGT1A10](https://ensembl.org/Search/Results?q=UGT1A10) | UDP glucuronosyltransferase family 1 member A10 [Source:HGNC Symbol;Acc:HGNC:12531] | 61 | 0.369 | 0.4414 | Yes |
| 8 | [UGT1A8](https://ensembl.org/Search/Results?q=UGT1A8) | UDP glucuronosyltransferase family 1 member A8 [Source:HGNC Symbol;Acc:HGNC:12540] | 67 | 0.368 | 0.4982 | Yes |
| 9 | [UGT1A7](https://ensembl.org/Search/Results?q=UGT1A7) | UDP glucuronosyltransferase family 1 member A7 [Source:HGNC Symbol;Acc:HGNC:12539] | 69 | 0.367 | 0.5575 | Yes |
| 10 | [CYP1A1](https://ensembl.org/Search/Results?q=CYP1A1) | cytochrome P450 family 1 subfamily A member 1 [Source:HGNC Symbol;Acc:HGNC:2595] | 95 | 0.329 | 0.5946 | Yes |
| 11 | [GSTO1](https://ensembl.org/Search/Results?q=GSTO1) | glutathione S-transferase omega 1 [Source:HGNC Symbol;Acc:HGNC:13312] | 106 | 0.316 | 0.6395 | Yes |
| 12 | [GSTA1](https://ensembl.org/Search/Results?q=GSTA1) | glutathione S-transferase alpha 1 [Source:HGNC Symbol;Acc:HGNC:4626] | 147 | 0.269 | 0.6566 | Yes |
| 13 | [MGST3](https://ensembl.org/Search/Results?q=MGST3) | microsomal glutathione S-transferase 3 [Source:HGNC Symbol;Acc:HGNC:7064] | 153 | 0.259 | 0.6957 | Yes |
| 14 | [GSTM1](https://ensembl.org/Search/Results?q=GSTM1) | glutathione S-transferase mu 1 [Source:HGNC Symbol;Acc:HGNC:4632] | 175 | 0.234 | 0.7198 | Yes |
| 15 | [GLYAT](https://ensembl.org/Search/Results?q=GLYAT) | glycine-N-acyltransferase [Source:HGNC Symbol;Acc:HGNC:13734] | 344 | 0.091 | 0.6220 | No |
| 16 | [MTARC2](https://ensembl.org/Search/Results?q=MTARC2) | mitochondrial amidoxime reducing component 2 [Source:HGNC Symbol;Acc:HGNC:26064] | 364 | 0.077 | 0.6219 | No |
| 17 | [MGST2](https://ensembl.org/Search/Results?q=MGST2) | microsomal glutathione S-transferase 2 [Source:HGNC Symbol;Acc:HGNC:7063] | 500 | -0.003 | 0.5318 | No |
| 18 | [SULT2A1](https://ensembl.org/Search/Results?q=SULT2A1) | sulfotransferase family 2A member 1 [Source:HGNC Symbol;Acc:HGNC:11458] | 978 | -0.256 | 0.2535 | No |
| 19 | [AOC1](https://ensembl.org/Search/Results?q=AOC1) | amine oxidase copper containing 1 [Source:HGNC Symbol;Acc:HGNC:80] | 1158 | -0.302 | 0.1826 | No |
| 20 | [CYP26A1](https://ensembl.org/Search/Results?q=CYP26A1) | cytochrome P450 family 26 subfamily A member 1 [Source:HGNC Symbol;Acc:HGNC:2603] | 1236 | -0.320 | 0.1832 | No |



Fig 2: GOBP\_RESPONSE\_TO\_XENOBIOTIC\_STIMULUS

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



Fig 3: GOBP\_RESPONSE\_TO\_XENOBIOTIC\_STIMULUS: Random ES distribution

Gene set null distribution of ES for **GOBP\_RESPONSE\_TO\_XENOBIOTIC\_STIMULUS**