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\_TRANSLATIONAL\_INITIATION |
| Enrichment Score (ES) | 0.52592975 |
| Normalized Enrichment Score (NES) | 2.5918736 |
| Nominal p-value | 0.0 |
| FDR q-value | 2.0220822E-4 |
| FWER p-Value | 0.002 |



Fig 1: Enrichment plot: GOBP\_TRANSLATIONAL\_INITIATION

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_TRANSLATIONAL_INITIATION.tsv)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | SYMBOL | TITLE | RANK IN GENE LIST | RANK METRIC SCORE | RUNNING ES | CORE ENRICHMENT |
| 1 | [NPM1](https://ensembl.org/Search/Results?q=NPM1) | nucleophosmin 1 [Source:HGNC Symbol;Acc:HGNC:7910] | 11 | 0.481 | 0.0637 | Yes |
| 2 | [RPS12](https://ensembl.org/Search/Results?q=RPS12) | ribosomal protein S12 [Source:HGNC Symbol;Acc:HGNC:10385] | 74 | 0.360 | 0.0747 | Yes |
| 3 | [RPL38](https://ensembl.org/Search/Results?q=RPL38) | ribosomal protein L38 [Source:HGNC Symbol;Acc:HGNC:10349] | 78 | 0.355 | 0.1252 | Yes |
| 4 | [RPS2](https://ensembl.org/Search/Results?q=RPS2) | ribosomal protein S2 [Source:HGNC Symbol;Acc:HGNC:10404] | 151 | 0.261 | 0.1147 | Yes |
| 5 | [RPS18](https://ensembl.org/Search/Results?q=RPS18) | ribosomal protein S18 [Source:HGNC Symbol;Acc:HGNC:10401] | 157 | 0.255 | 0.1490 | Yes |
| 6 | [RPL41](https://ensembl.org/Search/Results?q=RPL41) | ribosomal protein L41 [Source:HGNC Symbol;Acc:HGNC:10354] | 165 | 0.245 | 0.1806 | Yes |
| 7 | [RPS28](https://ensembl.org/Search/Results?q=RPS28) | ribosomal protein S28 [Source:HGNC Symbol;Acc:HGNC:10418] | 167 | 0.245 | 0.2161 | Yes |
| 8 | [RPS20](https://ensembl.org/Search/Results?q=RPS20) | ribosomal protein S20 [Source:HGNC Symbol;Acc:HGNC:10405] | 173 | 0.237 | 0.2479 | Yes |
| 9 | [RPLP0](https://ensembl.org/Search/Results?q=RPLP0) | ribosomal protein lateral stalk subunit P0 [Source:HGNC Symbol;Acc:HGNC:10371] | 183 | 0.226 | 0.2752 | Yes |
| 10 | [RPLP1](https://ensembl.org/Search/Results?q=RPLP1) | ribosomal protein lateral stalk subunit P1 [Source:HGNC Symbol;Acc:HGNC:10372] | 201 | 0.198 | 0.2929 | Yes |
| 11 | [RPL32](https://ensembl.org/Search/Results?q=RPL32) | ribosomal protein L32 [Source:HGNC Symbol;Acc:HGNC:10336] | 206 | 0.193 | 0.3186 | Yes |
| 12 | [RPS9](https://ensembl.org/Search/Results?q=RPS9) | ribosomal protein S9 [Source:HGNC Symbol;Acc:HGNC:10442] | 207 | 0.192 | 0.3471 | Yes |
| 13 | [RPL13A](https://ensembl.org/Search/Results?q=RPL13A) | ribosomal protein L13a [Source:HGNC Symbol;Acc:HGNC:10304] | 248 | 0.157 | 0.3430 | Yes |
| 14 | [RPL35](https://ensembl.org/Search/Results?q=RPL35) | ribosomal protein L35 [Source:HGNC Symbol;Acc:HGNC:10344] | 253 | 0.152 | 0.3628 | Yes |
| 15 | [RPL8](https://ensembl.org/Search/Results?q=RPL8) | ribosomal protein L8 [Source:HGNC Symbol;Acc:HGNC:10368] | 267 | 0.140 | 0.3747 | Yes |
| 16 | [RPS27A](https://ensembl.org/Search/Results?q=RPS27A) | ribosomal protein S27a [Source:HGNC Symbol;Acc:HGNC:10417] | 269 | 0.140 | 0.3947 | Yes |
| 17 | [RPL39](https://ensembl.org/Search/Results?q=RPL39) | ribosomal protein L39 [Source:HGNC Symbol;Acc:HGNC:10350] | 271 | 0.139 | 0.4146 | Yes |
| 18 | [RPS4X](https://ensembl.org/Search/Results?q=RPS4X) | ribosomal protein S4 X-linked [Source:HGNC Symbol;Acc:HGNC:10424] | 273 | 0.137 | 0.4342 | Yes |
| 19 | [RPS23](https://ensembl.org/Search/Results?q=RPS23) | ribosomal protein S23 [Source:HGNC Symbol;Acc:HGNC:10410] | 278 | 0.133 | 0.4512 | Yes |
| 20 | [RPL18](https://ensembl.org/Search/Results?q=RPL18) | ribosomal protein L18 [Source:HGNC Symbol;Acc:HGNC:10310] | 281 | 0.132 | 0.4693 | Yes |
| 21 | [RPL10](https://ensembl.org/Search/Results?q=RPL10) | ribosomal protein L10 [Source:HGNC Symbol;Acc:HGNC:10298] | 305 | 0.115 | 0.4706 | Yes |
| 22 | [RPS14](https://ensembl.org/Search/Results?q=RPS14) | ribosomal protein S14 [Source:HGNC Symbol;Acc:HGNC:10387] | 310 | 0.114 | 0.4847 | Yes |
| 23 | [RPS29](https://ensembl.org/Search/Results?q=RPS29) | ribosomal protein S29 [Source:HGNC Symbol;Acc:HGNC:10419] | 322 | 0.105 | 0.4928 | Yes |
| 24 | [RPL27A](https://ensembl.org/Search/Results?q=RPL27A) | ribosomal protein L27a [Source:HGNC Symbol;Acc:HGNC:10329] | 350 | 0.089 | 0.4876 | Yes |
| 25 | [RPS27](https://ensembl.org/Search/Results?q=RPS27) | ribosomal protein S27 [Source:HGNC Symbol;Acc:HGNC:10416] | 355 | 0.085 | 0.4975 | Yes |
| 26 | [RPL13](https://ensembl.org/Search/Results?q=RPL13) | ribosomal protein L13 [Source:HGNC Symbol;Acc:HGNC:10303] | 358 | 0.082 | 0.5082 | Yes |
| 27 | [RPL37](https://ensembl.org/Search/Results?q=RPL37) | ribosomal protein L37 [Source:HGNC Symbol;Acc:HGNC:10347] | 362 | 0.078 | 0.5177 | Yes |
| 28 | [RPS19](https://ensembl.org/Search/Results?q=RPS19) | ribosomal protein S19 [Source:HGNC Symbol;Acc:HGNC:10402] | 375 | 0.068 | 0.5196 | Yes |
| 29 | [RPL14](https://ensembl.org/Search/Results?q=RPL14) | ribosomal protein L14 [Source:HGNC Symbol;Acc:HGNC:10305] | 391 | 0.058 | 0.5181 | Yes |
| 30 | [RPS3](https://ensembl.org/Search/Results?q=RPS3) | ribosomal protein S3 [Source:HGNC Symbol;Acc:HGNC:10420] | 393 | 0.058 | 0.5259 | Yes |
| 31 | [RPL18A](https://ensembl.org/Search/Results?q=RPL18A) | ribosomal protein L18a [Source:HGNC Symbol;Acc:HGNC:10311] | 408 | 0.050 | 0.5238 | No |
| 32 | [RPS3A](https://ensembl.org/Search/Results?q=RPS3A) | ribosomal protein S3A [Source:HGNC Symbol;Acc:HGNC:10421] | 429 | 0.036 | 0.5155 | No |
| 33 | [RPL3](https://ensembl.org/Search/Results?q=RPL3) | ribosomal protein L3 [Source:HGNC Symbol;Acc:HGNC:10332] | 452 | 0.019 | 0.5032 | No |
| 34 | [RPL37A](https://ensembl.org/Search/Results?q=RPL37A) | ribosomal protein L37a [Source:HGNC Symbol;Acc:HGNC:10348] | 453 | 0.019 | 0.5060 | No |
| 35 | [RPS8](https://ensembl.org/Search/Results?q=RPS8) | ribosomal protein S8 [Source:HGNC Symbol;Acc:HGNC:10441] | 464 | 0.015 | 0.5013 | No |
| 36 | [RPL31](https://ensembl.org/Search/Results?q=RPL31) | ribosomal protein L31 [Source:HGNC Symbol;Acc:HGNC:10334] | 467 | 0.013 | 0.5019 | No |
| 37 | [RPS5](https://ensembl.org/Search/Results?q=RPS5) | ribosomal protein S5 [Source:HGNC Symbol;Acc:HGNC:10426] | 488 | 0.003 | 0.4887 | No |
| 38 | [PAIP2B](https://ensembl.org/Search/Results?q=PAIP2B) | poly(A) binding protein interacting protein 2B [Source:HGNC Symbol;Acc:HGNC:29200] | 499 | -0.003 | 0.4823 | No |
| 39 | [RPL5](https://ensembl.org/Search/Results?q=RPL5) | ribosomal protein L5 [Source:HGNC Symbol;Acc:HGNC:10360] | 555 | -0.030 | 0.4492 | No |
| 40 | [BANK1](https://ensembl.org/Search/Results?q=BANK1) | B cell scaffold protein with ankyrin repeats 1 [Source:HGNC Symbol;Acc:HGNC:18233] | 703 | -0.106 | 0.3647 | No |
| 41 | [CCL5](https://ensembl.org/Search/Results?q=CCL5) | C-C motif chemokine ligand 5 [Source:HGNC Symbol;Acc:HGNC:10632] | 952 | -0.245 | 0.2318 | No |
| 42 | [HSPB1](https://ensembl.org/Search/Results?q=HSPB1) | heat shock protein family B (small) member 1 [Source:HGNC Symbol;Acc:HGNC:5246] | 1022 | -0.276 | 0.2256 | No |
| 43 | [EIF1AY](https://ensembl.org/Search/Results?q=EIF1AY) | eukaryotic translation initiation factor 1A Y-linked [Source:HGNC Symbol;Acc:HGNC:3252] | 1131 | -0.302 | 0.1965 | No |
| 44 | [DAZL](https://ensembl.org/Search/Results?q=DAZL) | deleted in azoospermia like [Source:HGNC Symbol;Acc:HGNC:2685] | 1411 | -0.410 | 0.0668 | No |



Fig 2: GOBP\_TRANSLATIONAL\_INITIATION

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



Fig 3: GOBP\_TRANSLATIONAL\_INITIATION: Random ES distribution

Gene set null distribution of ES for **GOBP\_TRANSLATIONAL\_INITIATION**