Supplementary Table 1: Top 100 most stable genes across the dataset.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | index | hgnc | Std | mean | CoV | MFC | score |
| 0 | ENSG00000134056 | MRPS36 | 0.006093 | 0.022662 | 0.268868 | 2.66242 | 0.71584 |
| 1 | ENSG00000164258 | NDUFS4 | 0.001296 | 0.004724 | 0.274443 | 2.845697 | 0.780981 |
| 2 | ENSG00000163682 | RPL9 | 0.628429 | 2.157305 | 0.291303 | 3.381323 | 0.984989 |
| 3 | ENSG00000256812 | CAPNS2 | 0.263074 | 0.896048 | 0.293594 | 3.134269 | 0.920202 |
| 4 | ENSG00000034713 | GABARAPL2 | 0.037215 | 0.124763 | 0.298284 | 3.357143 | 1.001383 |
| 5 | ENSG00000115520 | COQ10B | 0.007549 | 0.025289 | 0.298522 | 3.590278 | 1.071777 |
| 6 | ENSG00000172809 | RPL38 | 0.182736 | 0.598401 | 0.305374 | 2.999141 | 0.91586 |
| 7 | ENSG00000232388 | LINC00493 | 0.046665 | 0.152579 | 0.30584 | 3.986577 | 1.219254 |
| 8 | ENSG00000205707 | LYRM5 | 0.006703 | 0.021713 | 0.30872 | 4.34127 | 1.340236 |
| 9 | ENSG00000137876 | RSL24D1 | 0.028333 | 0.090924 | 0.311612 | 3.679587 | 1.146605 |
| 10 | ENSG00000142676 | RPL11 | 0.826112 | 2.645291 | 0.312295 | 3.169891 | 0.989942 |
| 11 | ENSG00000145592 | RPL37 | 0.279391 | 0.890765 | 0.313653 | 3.431567 | 1.07632 |
| 12 | ENSG00000125691 | RPL23 | 0.49993 | 1.593471 | 0.313737 | 3.682954 | 1.155478 |
| 13 | ENSG00000176209 | C8orf40 | 0.009582 | 0.030335 | 0.315886 | 3.273743 | 1.034129 |
| 14 | ENSG00000137038 | C9orf123 | 0.001583 | 0.005012 | 0.315918 | 3.169173 | 1.001199 |
| 15 | ENSG00000138326 | RPS24 | 0.197593 | 0.623468 | 0.316926 | 3.202002 | 1.014797 |
| 16 | ENSG00000104671 | DCTN6 | 0.004325 | 0.013514 | 0.320026 | 5.609375 | 1.795147 |
| 17 | ENSG00000186132 | C2orf76 | 0.000562 | 0.001751 | 0.320785 | 4.145833 | 1.329922 |
| 18 | ENSG00000111775 | COX6A1 | 0.065015 | 0.202392 | 0.321235 | 3.466216 | 1.11347 |
| 19 | ENSG00000109220 | CHIC2 | 0.00321 | 0.009972 | 0.321853 | 3.246006 | 1.044736 |
| 20 | ENSG00000123595 | RAB9A | 0.009084 | 0.028064 | 0.323679 | 3.715278 | 1.202558 |
| 21 | ENSG00000173926 | MARCH3 | 0.000895 | 0.002759 | 0.324251 | 3.935484 | 1.276086 |
| 22 | ENSG00000114942 | EEF1B2 | 0.715224 | 2.20188 | 0.324824 | 3.358338 | 1.09087 |
| 23 | ENSG00000099246 | RAB18 | 0.02438 | 0.07476 | 0.326116 | 4.440933 | 1.44826 |
| 24 | ENSG00000129559 | NEDD8 | 0.008609 | 0.026238 | 0.328097 | 3.513636 | 1.152814 |
| 25 | ENSG00000109775 | UFSP2 | 0.00576 | 0.01754 | 0.328388 | 2.793103 | 0.917222 |
| 26 | ENSG00000089009 | RPL6 | 0.330094 | 1.002956 | 0.329121 | 3.786687 | 1.246279 |
| 27 | ENSG00000089289 | IGBP1 | 0.006451 | 0.019476 | 0.331218 | 3.493036 | 1.156955 |
| 28 | ENSG00000090266 | NDUFB2 | 0.007901 | 0.023823 | 0.331632 | 3.745407 | 1.242097 |
| 29 | ENSG00000139168 | ZCRB1 | 0.016838 | 0.050605 | 0.332743 | 4.766773 | 1.586111 |
| 30 | ENSG00000143947 | RPS27A | 1.098735 | 3.301484 | 0.3328 | 3.443064 | 1.145853 |
| 31 | ENSG00000123349 | PFDN5 | 0.21662 | 0.650816 | 0.332844 | 3.79084 | 1.261759 |
| 32 | ENSG00000129625 | REEP5 | 0.015452 | 0.046352 | 0.333366 | 3.385512 | 1.128614 |
| 33 | ENSG00000108298 | RPL19 | 1.103723 | 3.308867 | 0.333565 | 3.066867 | 1.023 |
| 34 | ENSG00000169609 | C15orf40 | 0.003606 | 0.010806 | 0.333705 | 3.158621 | 1.054047 |
| 35 | ENSG00000116251 | RPL22 | 0.073085 | 0.218037 | 0.335193 | 3.94527 | 1.322428 |
| 36 | ENSG00000164615 | CAMLG | 0.014345 | 0.042782 | 0.335314 | 3.54321 | 1.188086 |
| 37 | ENSG00000065615 | CYB5R4 | 0.00178 | 0.005297 | 0.336007 | 5.137778 | 1.726327 |
| 38 | ENSG00000137947 | GTF2B | 0.00436 | 0.01297 | 0.336177 | 3.131313 | 1.052674 |
| 39 | ENSG00000109270 | LAMTOR3 | 0.018066 | 0.053646 | 0.336769 | 3.764444 | 1.26775 |
| 40 | ENSG00000120727 | PAIP2 | 0.006873 | 0.020395 | 0.337023 | 3.832727 | 1.291717 |
| 41 | ENSG00000120860 | CCDC53 | 0.002629 | 0.007777 | 0.338091 | 3.504902 | 1.184977 |
| 42 | ENSG00000148303 | RPL7A | 1.645695 | 4.865026 | 0.33827 | 3.449708 | 1.166934 |
| 43 | ENSG00000169372 | CRADD | 0.000251 | 0.00074 | 0.339362 | 4.506024 | 1.529171 |
| 44 | ENSG00000168958 | MFF | 0.010529 | 0.03102 | 0.339427 | 3.130653 | 1.062627 |
| 45 | ENSG00000138381 | ASNSD1 | 0.029917 | 0.088125 | 0.339486 | 3.128514 | 1.062086 |
| 46 | ENSG00000134058 | CDK7 | 0.005486 | 0.016148 | 0.339746 | 4.06812 | 1.382126 |
| 47 | ENSG00000110700 | RPS13 | 0.695341 | 2.038367 | 0.341127 | 3.177869 | 1.084055 |
| 48 | ENSG00000164587 | RPS14 | 0.512991 | 1.500733 | 0.341827 | 3.352739 | 1.146057 |
| 49 | ENSG00000257267 | ZNF271 | 0.006998 | 0.020457 | 0.342058 | 3.330472 | 1.139215 |
| 50 | ENSG00000085231 | TAF9 | 0.017135 | 0.049927 | 0.343201 | 3.750588 | 1.287207 |
| 51 | ENSG00000166454 | ATMIN | 0.065462 | 0.190631 | 0.343395 | 4.528626 | 1.555106 |
| 52 | ENSG00000082515 | MRPL22 | 0.003617 | 0.01053 | 0.343468 | 3.965278 | 1.361945 |
| 53 | ENSG00000090263 | MRPS33 | 0.014608 | 0.042504 | 0.343698 | 3.836634 | 1.318645 |
| 54 | ENSG00000213246 | SUPT4H1 | 0.022592 | 0.065669 | 0.344032 | 4.785714 | 1.646441 |
| 55 | ENSG00000197756 | RPL37A | 0.039075 | 0.113263 | 0.344991 | 3.379184 | 1.165789 |
| 56 | ENSG00000142937 | RPS8 | 1.390853 | 4.030619 | 0.345072 | 3.372924 | 1.163901 |
| 57 | ENSG00000177879 | AP3S1 | 0.005596 | 0.016211 | 0.345169 | 3.809107 | 1.314784 |
| 58 | ENSG00000196531 | NACA | 0.208449 | 0.602981 | 0.345698 | 3.5859 | 1.239637 |
| 59 | ENSG00000074201 | CLNS1A | 0.003056 | 0.00882 | 0.346489 | 2.709117 | 0.938681 |
| 60 | ENSG00000116030 | SUMO1 | 0.013673 | 0.039438 | 0.346689 | 3.9399 | 1.365919 |
| 61 | ENSG00000134330 | IAH1 | 0.005391 | 0.015516 | 0.347454 | 3.158371 | 1.09739 |
| 62 | ENSG00000156508 | EEF1A1 | 4.683542 | 13.478332 | 0.347487 | 3.466657 | 1.204618 |
| 63 | ENSG00000113558 | SKP1 | 0.019312 | 0.055555 | 0.347613 | 3.723517 | 1.294344 |
| 64 | ENSG00000170786 | SDR16C5 | 0.029014 | 0.083381 | 0.347971 | 4.494885 | 1.56409 |
| 65 | ENSG00000137720 | C11orf1 | 0.009188 | 0.026378 | 0.348316 | 4.445946 | 1.548594 |
| 66 | ENSG00000174444 | RPL4 | 0.354445 | 1.017335 | 0.348405 | 3.802683 | 1.324875 |
| 67 | ENSG00000134419 | RPS15A | 0.065494 | 0.187664 | 0.348994 | 3.911001 | 1.364916 |
| 68 | ENSG00000137154 | RPS6 | 1.696641 | 4.858436 | 0.349216 | 3.695998 | 1.2907 |
| 69 | ENSG00000076043 | REXO2 | 0.024413 | 0.069908 | 0.34922 | 3.399549 | 1.18719 |
| 70 | ENSG00000071082 | RPL31 | 0.137632 | 0.39381 | 0.349488 | 3.767145 | 1.316571 |
| 71 | ENSG00000170310 | STX8 | 0.000328 | 0.000939 | 0.349641 | 4.078431 | 1.425988 |
| 72 | ENSG00000170632 | ARMC10 | 0.014073 | 0.040233 | 0.349791 | 3.310744 | 1.15807 |
| 73 | ENSG00000152422 | XRCC4 | 0.000184 | 0.000525 | 0.349921 | 4.112676 | 1.439112 |
| 74 | ENSG00000231312 | AC007246.3 | 0.000153 | 0.000437 | 0.350007 | 3.263158 | 1.142128 |
| 75 | ENSG00000106028 | SSBP1 | 0.008239 | 0.023491 | 0.350724 | 3.730392 | 1.308339 |
| 76 | ENSG00000184924 | PTRHD1 | 0.014539 | 0.041403 | 0.351167 | 3.653333 | 1.28293 |
| 77 | ENSG00000108278 | ZNHIT3 | 0.011084 | 0.03153 | 0.351541 | 4.322034 | 1.519371 |
| 78 | ENSG00000145741 | BTF3 | 0.392303 | 1.115533 | 0.351673 | 4.289748 | 1.508588 |
| 79 | ENSG00000167863 | ATP5H | 0.056578 | 0.160574 | 0.352347 | 3.656646 | 1.288409 |
| 80 | ENSG00000168273 | SMIM4 | 0.001177 | 0.003338 | 0.352471 | 4.358209 | 1.536141 |
| 81 | ENSG00000172428 | MYEOV2 | 0.017193 | 0.048725 | 0.352859 | 4.27907 | 1.509907 |
| 82 | ENSG00000184752 | NDUFA12 | 0.002046 | 0.005794 | 0.35302 | 3.796053 | 1.340083 |
| 83 | ENSG00000134996 | OSTF1 | 0.007595 | 0.02151 | 0.353106 | 3.403179 | 1.201683 |
| 84 | ENSG00000117143 | UAP1 | 0.006989 | 0.019785 | 0.353233 | 5.21519 | 1.842176 |
| 85 | ENSG00000122873 | CISD1 | 0.006504 | 0.018404 | 0.353396 | 4.12426 | 1.457499 |
| 86 | ENSG00000131174 | COX7B | 0.07215 | 0.203936 | 0.353786 | 4.354467 | 1.54055 |
| 87 | ENSG00000055211 | GINM1 | 0.013259 | 0.037438 | 0.354163 | 3.261596 | 1.155136 |
| 88 | ENSG00000132581 | SDF2 | 0.011223 | 0.03168 | 0.35427 | 4.769663 | 1.68975 |
| 89 | ENSG00000198898 | CAPZA2 | 0.006747 | 0.019039 | 0.354373 | 4.641667 | 1.644883 |
| 90 | ENSG00000164182 | NDUFAF2 | 0.000508 | 0.001434 | 0.354454 | 4.900901 | 1.737143 |
| 91 | ENSG00000150316 | CWC15 | 0.027324 | 0.077018 | 0.354779 | 3.510684 | 1.245518 |
| 92 | ENSG00000165502 | RPL36AL | 0.288958 | 0.813835 | 0.355058 | 4.679487 | 1.661487 |
| 93 | ENSG00000122406 | RPL5 | 0.468851 | 1.318062 | 0.355712 | 3.708197 | 1.319052 |
| 94 | ENSG00000109332 | UBE2D3 | 0.031704 | 0.089078 | 0.355915 | 3.725847 | 1.326086 |
| 95 | ENSG00000185088 | RPS27L | 0.006966 | 0.01956 | 0.35612 | 3.971154 | 1.414206 |
| 96 | ENSG00000144895 | EIF2A | 0.018073 | 0.050721 | 0.356318 | 3.347458 | 1.192759 |
| 97 | ENSG00000198015 | MRPL42 | 0.009405 | 0.026381 | 0.35649 | 5.412088 | 1.929357 |
| 98 | ENSG00000177556 | ATOX1 | 0.00876 | 0.024553 | 0.356782 | 4.312121 | 1.538489 |
| 99 | ENSG00000000419 | DPM1 | 0.011694 | 0.032744 | 0.357117 | 4.621538 | 1.65043 |
| 100 | ENSG00000165629 | ATP5C1 | 0.046482 | 0.130114 | 0.357244 | 4.135113 | 1.47724 |