

SUPPLEMENTARY TABLE S5. THE EXPRESSION OF PD-RELATED AND MITOCHONDRIAL GENES IN THE REPRESENTATIVE LINE H9

| <i>Gene ID</i> | <i>ESC_H9</i> | <i>NSC_H9</i> | <i>DA1_H9</i> | <i>DA2_H9</i> |
|------------------|---------------|---------------|---------------|---------------|
| PD-related genes | | | | |
| ACMSD | 137 | 102 | 16 | 1 |
| ATP13A2 (PARK9) | 466 | 339 | 385 | 868 |
| BST1 | 44 | 1 | 6 | 5 |
| FGF20 | 44 | 36 | 42 | 45 |
| GAK | 6,026 | 3,813 | 2,153 | 1,779 |
| GBA | 492 | 1,118 | 586 | 409 |
| GNPMB | 60 | 5 | 1 | 6 |
| HIP1R | 45 | 232 | 100 | 424 |
| LRRK2 (PARK8) | 6 | 32 | 15 | 22 |
| MAPT | 45 | 637 | 491 | 11,594 |
| MCCC1 | 1,102 | 1,865 | 1,963 | 1,275 |
| MED13 | 114 | 61 | 66 | 46 |
| DJ-1 (PARK7) | 8,557 | 9,533 | 13,761 | 13,541 |
| PDXK | 3,627 | 2,194 | 1,349 | 2,370 |
| PINK1 (PARK6) | 197 | 412 | 738 | 1,430 |
| PM20D1 | 1 | 3 | 6 | 26 |
| RAB25 | 1,237 | 25 | 1 | 1 |
| SETD1A | 1,191 | 1,213 | 1,751 | 950 |
| SNCA (PARK1) | 495 | 511 | 453 | 1,749 |
| SNCAIP | 242 | 1,526 | 2,293 | 3,872 |
| STK39 | 1,983 | 4,920 | 4,906 | 4,813 |
| UCHL1 (PARK5) | 7,780 | 3,060 | 6,041 | 16,776 |
| PARK2 | 33 | 38 | 48 | 66 |
| GIGYF2 (PARK11) | 18 | 25 | 76 | 17 |
| HTRA2 (PARK13) | 289 | 605 | 878 | 644 |
| PLA2G6 (PARK14) | 50 | 55 | 62 | 57 |
| FBXO7 (PARK 15) | 1,236 | 1,682 | 1,488 | 909 |
| VPS35 (PARK17) | 2,753 | 5,754 | 4,428 | 4,545 |
| EIF4G1 (PARK18) | 5,958 | 4,281 | 2,011 | 1,338 |
| MC1R | 139 | 193 | 289 | 263 |
| ADH1C | 1 | 1 | 4 | 1 |
| Mitochondrial | | | | |
| AIFM2 | 68 | 9 | 1 | 1 |
| AIP | 861 | 992 | 987 | 1,234 |
| ATP12A | 55 | 1 | 22 | 22 |
| ATP4A | 5 | 1 | 1 | 1 |
| ATP4B | 16 | 19 | 19 | 13 |
| ATP5A1 | 36,369 | 29,133 | 28,649 | 30,739 |
| ATP5B | 53,857 | 33,932 | 37,817 | 33,638 |
| ATP5C1 | | | | |
| ATP5F1 | 11,321 | 14,358 | 14,756 | 12,517 |
| ATP5G1 | 8,953 | 4,641 | 2,734 | 3,285 |
| ATP5G2 | 11,821 | 17,075 | 23,156 | 12,667 |
| ATP5G3 | 501 | 380 | 131 | 182 |
| ATP5H | 19,680 | 15,857 | 16,683 | 14,741 |
| ATP5I | 26,389 | 19,519 | 10,523 | 12,667 |
| ATP5J | 17,299 | 16,472 | 13,522 | 13,186 |
| ATP5J2 | 10,295 | 8,999 | 9,635 | 7,794 |
| ATP5L | 19,673 | 19,035 | 19,120 | 18,020 |
| ATP5O | 12,908 | 14,218 | 17,692 | 15,950 |
| ATP6V0A2 | 748 | 778 | 532 | 261 |
| ATP6V0D2 | 5 | 28 | 14 | 37 |
| ATP6V1C2 | 1 | 10 | 20 | 12 |
| ATP6V1E2 | 186 | 152 | 92 | 134 |
| ATP6V1G3 | 25 | 10 | 3 | 2 |
| BAK1 | 278 | 202 | 78 | 4 |
| BBC3 | 5 | 1 | 435 | 479 |
| BCL2 | 228 | 1,244 | 1,102 | 939 |
| BCL2L1 | 4,773 | 4,271 | 5,579 | 6,366 |

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SUPPLEMENTARY TABLE S5. (CONTINUED)

| <i>Gene ID</i> | <i>ESC_H9</i> | <i>NSC_H9</i> | <i>DA1_H9</i> | <i>DA2_H9</i> |
|----------------|---------------|---------------|---------------|---------------|
| BCS1L | 600 | 679 | 757 | 716 |
| BID | 769 | 275 | 377 | 220 |
| BNIP3 | 2,341 | 2,781 | 1,459 | 10,439 |
| CDKN2A | 63 | 10 | 52 | 27 |
| COX10 | 2,943 | 1,883 | 1,539 | 1,082 |
| COX18 | 43 | 61 | 8 | 14 |
| COX4I1 | 40,998 | 23,241 | 15,767 | 16,079 |
| COX4I2 | 1 | 1 | 1 | 1 |
| COX5A | 14,391 | 11,150 | 16,791 | 18,732 |
| COX5B | 8,759 | 7,639 | 14,549 | 11,929 |
| COX6A1 | 5,941 | 5,613 | 6,214 | 6,458 |
| COX6A2 | 1 | 1 | 1 | 21 |
| COX6B1 | 12,396 | 15,739 | 14,499 | 14,468 |
| COX6B2 | 28 | 4 | 26 | 10 |
| COX6C | 14,399 | 15,686 | 14,917 | 14,155 |
| COX7A2 | 21,346 | 18,909 | 15,210 | 20,676 |
| COX7B | 5,607 | 4,022 | 5,875 | 6,538 |
| COX8A | 17,136 | 14,137 | 18,481 | 14,705 |
| COX8C | 10 | 12 | 1 | 1 |
| CPT1B | 226 | 604 | 384 | 338 |
| CPT2 | 1,416 | 1,284 | 1,000 | 659 |
| CYC1 | 11,242 | 6,841 | 4,015 | 3,541 |
| DNM1L | 1,667 | 2,204 | 1,490 | 1,513 |
| FIS1 | 2,077 | 2,097 | 2,157 | 1,941 |
| FXC1 | 550 | 846 | 354 | 352 |
| GRPEL1 | 1,747 | 1,121 | 504 | 773 |
| HSP90AA1 | 40,766 | 34,953 | 26,483 | 21,424 |
| HSPD1 | 28,308 | 19,578 | 15,226 | 10,825 |
| IMMP1L | 14 | 98 | 44 | 78 |
| IMMP2L | 637 | 661 | 438 | 431 |
| LHPP | 1,067 | 399 | 616 | 852 |
| LRPPRC | 2,223 | 2,251 | 1,624 | 1,925 |
| MFN1 | 220 | 155 | 207 | 220 |
| MFN2 | 1,019 | 1,805 | 1,154 | 1,095 |
| MIPEP | 344 | 412 | 430 | 170 |
| MPV17 | 1,402 | 1,807 | 1,363 | 648 |
| MSTO1 | 365 | 351 | 834 | 472 |
| MTX2 | 4,055 | 2,866 | 2,968 | 4,008 |
| NDUFA1 | 16,403 | 15,444 | 9,001 | 8,745 |
| NDUFA10 | 1,036 | 868 | 1,541 | 1,556 |
| NDUFA11 | 7,605 | 8,686 | 8,999 | 6,963 |
| NDUFA2 | 1,323 | 8,164 | 7,195 | 7,784 |
| NDUFA3 | 8,227 | 9,619 | 10,260 | 8,727 |
| NDUFA4 | 27,546 | 27,338 | 21,476 | 23,521 |
| NDUFA5 | 19 | 1 | 57 | 106 |
| NDUFA6 | 571 | 6,137 | 2,285 | 2,767 |
| NDUFA7 | 2,962 | 2,839 | 1,816 | 1,378 |
| NDUFA8 | 5,646 | 4,954 | 5,289 | 4,759 |
| NDUFAB1 | 13,097 | 9,683 | 10,213 | 8,857 |
| NDUFB10 | 5,959 | 4,206 | 6,200 | 4,964 |
| NDUFB2 | 7,866 | 8,718 | 14,738 | 11,218 |
| NDUFB3 | 5,292 | 7,014 | 11,691 | 10,262 |
| NDUFB4 | 54 | 7 | 6 | 43 |
| NDUFB5 | 10,276 | 10,619 | 8,103 | 8,151 |
| NDUFB6 | 5,269 | 4,885 | 3,387 | 3,640 |
| NDUFB7 | 5,639 | 5,181 | 5,994 | 4,515 |
| NDUFB8 | 16,787 | 15,196 | 11,872 | 11,102 |
| NDUFB9 | 1,005 | 6,559 | 3,676 | 3,347 |
| NDUFC1 | 1,314 | 1,694 | 1,779 | 1,459 |
| NDUFC2 | 194 | 139 | 231 | 92 |
| NDUFS1 | 193 | 161 | 71 | 92 |
| NDUFS2 | 198 | 183 | 293 | 343 |

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SUPPLEMENTARY TABLE S5. (CONTINUED)

| Gene ID | ESC_H9 | NSC_H9 | DA1_H9 | DA2_H9 |
|----------|--------|--------|--------|--------|
| NDUFS3 | 8,744 | 7,250 | 7,580 | 6,725 |
| NDUFS4 | 4,105 | 4,427 | 6,980 | 7,114 |
| NDUFS5 | 22,262 | 15,496 | 13,875 | 10,406 |
| NDUFS6 | 9 | 17 | 1 | 2 |
| NDUFS7 | 4,506 | 3,024 | 2,404 | 2,621 |
| NDUFS8 | 9,763 | 7,659 | 10,758 | 9,803 |
| NDUFV1 | 3,392 | 2,990 | 2,880 | 3,216 |
| NDUFV2 | 7,390 | 6,691 | 9,225 | 6,964 |
| NDUFV3 | 195 | 130 | 85 | 50 |
| NEFL | 43 | 1,319 | 328 | 1,344 |
| OPA1 | 1,376 | 1,519 | 1,071 | 1,520 |
| OXA1L | 2,417 | 2,240 | 3,258 | 2,353 |
| PMAIP1 | 7,359 | 395 | 315 | 88 |
| PPA1 | 12,942 | 11,275 | 10,026 | 10,265 |
| PPA2 | 2,468 | 6,878 | 4,934 | 16,498 |
| RHOT1 | 1,602 | 2,201 | 1,958 | 3,039 |
| RHOT2 | 1,534 | 1,461 | 1,993 | 1,202 |
| SDHA | 2,187 | 2,412 | 1,749 | 1,709 |
| SDHB | 6,803 | 3,710 | 2,527 | 2,233 |
| SDHC | 2,425 | 2,239 | 1,149 | 1,023 |
| SDHD | 2,872 | 1,075 | 1,156 | 659 |
| SFN | 48 | 1 | 1 | 1 |
| SH3GLB1 | 1,898 | 1,582 | 1,201 | 1,295 |
| SLC25A1 | 1,628 | 2,935 | 1,853 | 1,686 |
| SLC25A10 | 246 | 136 | 203 | 180 |
| SLC25A12 | 248 | 216 | 482 | 412 |
| SLC25A13 | 2,154 | 1,960 | 3,031 | 1,587 |
| SLC25A14 | 692 | 1,227 | 1,826 | 3,580 |
| SLC25A15 | 995 | 1,172 | 1,141 | 826 |
| SLC25A16 | 114 | 28 | 102 | 98 |
| SLC25A17 | 459 | 234 | 185 | 190 |
| SLC25A19 | 591 | 81 | 216 | 153 |
| SLC25A2 | 1 | 1 | 1 | 1 |
| SLC25A20 | 291 | 473 | 480 | 371 |
| SLC25A21 | 288 | 230 | 63 | 40 |
| SLC25A22 | 1,974 | 1,107 | 594 | 778 |
| SLC25A23 | 2,884 | 3,625 | 2,791 | 2,321 |
| SLC25A24 | 490 | 547 | 176 | 51 |
| SLC25A25 | 1,746 | 1,561 | 896 | 1,743 |
| SLC25A27 | 48 | 86 | 71 | 188 |
| SLC25A3 | 21,292 | 19,554 | 20,592 | 12,340 |
| SLC25A30 | 1 | 19 | 1 | 1 |
| SLC25A31 | 1 | 13 | 24 | 1 |
| SLC25A37 | 353 | 654 | 364 | 176 |
| SLC25A4 | 7,785 | 3,548 | 4,069 | 9,399 |
| SLC25A5 | 19,525 | 13,969 | 23,000 | 19,701 |
| SOD1 | 17,008 | 16,834 | 17,034 | 16,040 |
| SOD2 | 1,047 | 743 | 830 | 588 |
| STARD3 | 72 | 105 | 373 | 278 |
| TAZ | 280 | 415 | 492 | 306 |
| TIMM10 | 3,564 | 2,525 | 1,031 | 876 |
| TIMM17A | 25 | 68 | 70 | 60 |
| TIMM17B | 1,350 | 888 | 1,043 | 1,069 |
| TIMM22 | 2,760 | 2,250 | 1,755 | 1,292 |
| TIMM23 | 12,443 | 10,166 | 11,458 | 7,920 |
| TIMM44 | 1,247 | 696 | 449 | 241 |
| TIMM50 | 1 | 1 | 1 | 1 |
| TIMM8A | 661 | 371 | 346 | 219 |
| TIMM8B | 332 | 296 | 699 | 552 |
| TIMM9 | 578 | 551 | 1,635 | 1,258 |
| TOMM20 | 7,615 | 9,061 | 6,217 | 7,046 |
| TOMM22 | 2,016 | 2,060 | 3,147 | 2,210 |

SUPPLEMENTARY TABLE S5. (CONTINUED)

| Gene ID | ESC_H9 | NSC_H9 | DA1_H9 | DA2_H9 |
|----------|--------|--------|--------|--------|
| TOMM34 | 2,042 | 1,675 | 1,730 | 909 |
| TOMM40 | 12,325 | 6,422 | 3,645 | 2,524 |
| TOMM40L | 181 | 266 | 518 | 640 |
| TOMM70A | 5,150 | 4,919 | 3,292 | 4,256 |
| TP53 | 553 | 1,760 | 2,388 | 672 |
| TSPO | 2,350 | 268 | 356 | 190 |
| UCP1 | 1 | 1 | 14 | 11 |
| UCP2 | 122 | 235 | 195 | 47 |
| UCP3 | 32 | 27 | 89 | 55 |
| UQCRC1 | 2,362 | 2,411 | 4,809 | 3,194 |
| UQCRC2 | 2,075 | 1,677 | 2,919 | 3,438 |
| UQCRCF51 | 16,172 | 15,368 | 9,445 | 9,332 |
| UQCRH | 23,875 | 19,542 | 15,442 | 12,430 |
| UQCRQ | 15,194 | 15,245 | 13,932 | 12,583 |
| UXT | 4,072 | 4,666 | 8,507 | 7,546 |

PD, Parkinson's disease.

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