**Supplementary Table 1.** List of differentially expressed proteins in pioglitazone treatment group compared to control

| Entrez ID | Symbol | Full name | Fold change ($log_2$) | FDR | PPARγ target |
|---|---|---|---|---|---|
| 72 | *ACTG2* | actin, gamma 2, smooth muscle, enteric | -0.958688809 | 0.002981283 | O |
| 397 | *ARHGDIB* | Rho GDP dissociation inhibitor beta | 0.625825054 | 0.007577428 | X |
| 648 | *BMI1* | BMI1 proto-oncogene, polycomb ring finger | -0.617058544 | 0.004968805 | X |
| 670 | *BPHL* | biphenyl hydrolase like | -0.841360761 | 0.003726604 | X |
| 1072 | *CFL1* | cofilin 1 | 0.620478313 | 0.007639538 | X |
| 1109 | *AKR1C4* | aldo-keto reductase family 1 member C4 | 0.672781464 | 0.006707887 | X |
| 1645 | *AKR1C1* | aldo-keto reductase family 1 member C1 | 0.602943735 | 0.008012198 | X |
| 1646 | *AKR1C2* | aldo-keto reductase family 1 member C2 | 0.661433925 | 0.006832107 | X |
| 1652 | *DDT* | D-dopachrome tautomerase | 0.764531806 | 0.005589906 | X |
| 1674 | *DES* | desmin | -0.640940301 | 0.004596145 | X |
| 1828 | *DSG1* | desmoglein 1 | 0.911949854 | 0.003664494 | X |
| 1984 | *EIF5A* | eukaryotic translation initiation factor 5A | 0.690513849 | 0.006459447 | O |
| 2049 | *EPHB3* | EPH receptor B3 | -0.359358246 | 0.014471645 | X |
| 2171 | *FABP5* | fatty acid binding protein 5 | 0.862825985 | 0.003850824 | O |
| 3010 | *HIST1H1T* | histone cluster 1 H1 family member t | -0.701870285 | 0.004099264 | X |
| 3013 | *HIST1H2AD* | histone cluster 1 H2A family member d | -0.898343647 | 0.003602384 | X |
| 3848 | *KRT1* | keratin 1 | 1.788206367 | 0.000434771 | X |
| 3852 | *KRT5* | keratin 5 | 1.134048807 | 0.002173852 | X |
| 3857 | *KRT9* | keratin 9 | 2.528639374 | 0.00018633 | X |
| 3868 | *KRT16* | keratin 16 | 1.297282537 | 0.001117981 | X |
| 4619 | *MYH1* | myosin heavy chain 1 | 0.859292693 | 0.003912934 | X |
| 4620 | *MYH2* | myosin heavy chain 2 | 0.859292693 | 0.003912934 | X |
| 4621 | *MYH3* | myosin heavy chain 3 | 0.859292693 | 0.003912934 | X |
| 4622 | *MYH4* | myosin heavy chain 4 | 0.859292693 | 0.003912934 | X |
| 4625 | *MYH7* | myosin heavy chain 7 | 0.859292693 | 0.003912934 | X |
| 4626 | *MYH8* | myosin heavy chain 8 | 0.859292693 | 0.003912934 | X |
| 4632 | *MYL1* | myosin light chain 1 | 0.85568144 | 0.004906695 | X |
| 4634 | *MYL3* | myosin light chain 3 | 0.85568144 | 0.004906695 | X |
| 5037 | *PEBP1* | phosphatidylethanolamine binding protein 1 | 0.641026424 | 0.007204767 | X |
| 5504 | *PPP1R2* | protein phosphatase 1 regulatory inhibitor subunit 2 | 0.922768269 | 0.003602384 | X |
| 5908 | *RAP1B* | RAP1B, member of RAS oncogene family | -0.914966528 | 0.003167613 | X |
| 6120 | *RPE* | ribulose-5-phosphate-3-epimerase | 0.628568868 | 0.007453208 | X |
| 6196 | *RPS6KA2* | ribosomal protein S6 kinase A2 | 0.617998592 | 0.007763758 | X |
| 6234 | *RPS28* | ribosomal protein S28 | 0.580084062 | 0.008446969 | X |
| 6273 | *S100A2* | S100 calcium binding protein A2 | 0.865541267 | 0.003788714 | X |
| 6282 | *S100A11* | S100 calcium binding protein A11 | 0.588140035 | 0.008322749 | O |
| 6418 | *SET* | SET nuclear proto-oncogene | 0.657686316 | 0.006956327 | X |
| 6451 | *SH3BGRL* | SH3 domain binding glutamate rich protein like | 0.823113571 | 0.005279355 | O |
| 6647 | *SOD1* | superoxide dismutase 1 | 0.625918635 | 0.007515318 | O |
| 6767 | *ST13* | ST13, Hsp70 interacting protein | 1.773193449 | 0.000496881 | X |
| 6902 | *TBCA* | tubulin folding cofactor A | 0.634898455 | 0.007328988 | X |

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**Supplementary Table 1.** Continued

| Entrez ID | Symbol | Full name | Fold change ($log_2$) | FDR | PPARγ target |
|---|---|---|---|---|---|
| 7092 | *TLL1* | tolloid like 1 | -0.643141545 | 0.004534035 | O |
| 7295 | *TXN* | thioredoxin | 0.79019292 | 0.005465686 | X |
| 7345 | *UCHL1* | ubiquitin C-terminal hydrolase L1 | 0.943937966 | 0.003416054 | O |
| 8331 | *HIST1H2AJ* | histone cluster 1 H2A family member j | -0.898343647 | 0.003602384 | X |
| 8334 | *HIST1H2AC* | histone cluster 1 H2A family member c | -1.132866271 | 0.002298072 | X |
| 8335 | *HIST1H2AB* | histone cluster 1 H2A family member b | -1.132866271 | 0.002298072 | X |
| 8337 | *HIST2H2AA3* | histone cluster 2 H2A family member a3 | -0.898343647 | 0.003602384 | X |
| 8338 | *HIST2H2AC* | histone cluster 2 H2A family member c | -0.898343647 | 0.003602384 | X |
| 8342 | *HIST1H2BM* | histone cluster 1 H2B family member m | -0.769735455 | 0.003912934 | X |
| 8359 | *HIST1H4A* | histone cluster 1 H4 family member a | -0.620506674 | 0.004906695 | X |
| 8641 | *PCDHGB4* | protocadherin gamma subfamily B, 4 | 0.059085461 | 0.314028485 | X |
| 8663 | *EIF3C* | eukaryotic translation initiation factor 3 subunit C | 0.64955922 | 0.007018437 | X |
| 8682 | *PEA15* | proliferation and apoptosis adaptor protein 15 | 0.639793386 | 0.007266877 | X |
| 8735 | *MYH13* | myosin heavy chain 13 | 0.859292693 | 0.003912934 | X |
| 8969 | *HIST1H2AG* | histone cluster 1 H2A family member g | -0.898343647 | 0.003602384 | X |
| 9491 | *PSMF1* | proteasome inhibitor subunit 1 | 0.632857715 | 0.007391098 | O |
| 9708 | *PCDHGA8* | protocadherin gamma subfamily A, 8 | 0.059085461 | 0.314028485 | X |
| 9819 | *TSC22D2* | TSC22 domain family member 2 | 0.590139815 | 0.008260638 | O |
| 9973 | *CCS* | copper chaperone for superoxide dismutase | 0.597979278 | 0.008136418 | X |
| 10204 | *NUTF2* | nuclear transport factor 2 | 0.712743337 | 0.005962566 | X |
| 10471 | *PFDN6* | prefoldin subunit 6 | 0.584469476 | 0.008384859 | X |
| 10910 | *SUGT1* | SGT1 homolog, MIS12 kinetochore complex assembly cochaperone | 0.692084408 | 0.006397337 | X |
| 11165 | *NUDT3* | nudix hydrolase 3 | 0.807561539 | 0.005403575 | X |
| 11315 | *PARK7* | Parkinsonism associated deglycase | 0.602697347 | 0.008074308 | O |
| 11333 | *PDAP1* | PDGFA associated protein 1 | 0.608723156 | 0.007825868 | X |
| 23589 | *CARHSP1* | calcium regulated heat stable protein 1 | 0.732419736 | 0.005838346 | O |
| 26025 | *PCDHGA12* | protocadherin gamma subfamily A, 12 | 0.059085461 | 0.314028485 | X |
| 26099 | *SZRD1* | SUZ RNA binding domain containing 1 | 0.619889555 | 0.007701648 | X |
| 28971 | *AAMDC* | adipogenesis associated Mth938 domain containing | 0.873681677 | 0.003726604 | X |
| 29085 | *PHPT1* | phosphohistidine phosphatase 1 | 0.841636634 | 0.005217245 | X |
| 29108 | *PYCARD* | PYD and CARD domain containing | 0.706355846 | 0.006335227 | X |
| 51155 | *JPT1* | Jupiter microtubule associated homolog 1 | 1.303660015 | 0.001055871 | X |
| 51247 | *PAIP2* | poly(A) binding protein interacting protein 2 | 0.593659942 | 0.008198528 | O |
| 51371 | *POMP* | proteasome maturation protein | 0.748151422 | 0.005776236 | O |
| 54503 | *ZDHHC13* | zinc finger DHHC-type containing 13 | -0.66132981 | 0.004471925 | X |
| 55204 | *GOLPH3L* | golgi phosphoprotein 3 like | 0.758168158 | 0.005714126 | X |
| 55573 | *CDV3* | CDV3 homolog | 0.678771359 | 0.006521557 | X |
| 55766 | *H2AFJ* | H2A histone family member J | -0.898343647 | 0.003602384 | X |
| 56097 | *PCDHGC5* | protocadherin gamma subfamily C, 5 | 0.059085461 | 0.314028485 | X |
| 56098 | *PCDHGC4* | protocadherin gamma subfamily C, 4 | 0.059085461 | 0.314028485 | X |
| 56102 | *PCDHGB3* | protocadherin gamma subfamily B, 3 | 0.059085461 | 0.314028485 | X |

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**Supplementary Table 1.** Continued

| Entrez ID | Symbol | Full name | Fold change ($log_2$) | FDR | PPARγ target |
|---|---|---|---|---|---|
| 56107 | *PCDHGA9* | protocadherin gamma subfamily A, 9 | 0.059085461 | 0.314028485 | X |
| 56109 | *PCDHGA6* | protocadherin gamma subfamily A, 6 | 0.059085461 | 0.314028485 | X |
| 56110 | *PCDHGA5* | protocadherin gamma subfamily A, 5 | 0.059085461 | 0.314028485 | X |
| 56111 | *PCDHGA4* | protocadherin gamma subfamily A, 4 | 0.059085461 | 0.314028485 | X |
| 56112 | *PCDHGA3* | protocadherin gamma subfamily A, 3 | 0.059085461 | 0.314028485 | X |
| 56113 | *PCDHGA2* | protocadherin gamma subfamily A, 2 | 0.059085461 | 0.314028485 | X |
| 56114 | *PCDHGA1* | protocadherin gamma subfamily A, 1 | 0.059085461 | 0.314028485 | X |
| 57092 | *PCNP* | PEST proteolytic signal containing nuclear protein | 0.659261219 | 0.006894217 | X |
| 57644 | *MYH7B* | myosin heavy chain 7B | 0.859292693 | 0.003912934 | X |
| 64981 | *MRPL34* | mitochondrial ribosomal protein L34 | -0.699126173 | 0.004347704 | O |
| 80179 | *MYO19* | myosin XIX | 0.607623334 | 0.007887978 | X |
| 83442 | *SH3BGRL3* | SH3 domain binding glutamate rich protein like 3 | 0.92511568 | 0.003540274 | X |
| 83641 | *FAM107B* | family with sequence similarity 107 member B | 0.853051658 | 0.005093025 | O |
| 84817 | *TXNDC17* | thioredoxin domain containing 17 | 0.854346522 | 0.005030915 | X |
| 85235 | *HIST1H2AH* | histone cluster 1 H2A family member h | -0.898343647 | 0.003602384 | X |
| 85236 | *HIST1H2BK* | histone cluster 1 H2B family member k | -2.453448927 | 0.00018633 | O |
| 90861 | *JPT2* | Jupiter microtubule associated homolog 2 | 0.851723785 | 0.005155135 | X |
| 92815 | *HIST3H2A* | histone cluster 3 H2A | -1.132866271 | 0.002298072 | X |
| 121391 | *KRT74* | keratin 74 | 1.056162722 | 0.002794953 | X |
| 134492 | *NUDCD2* | NudC domain containing 2 | 0.649352606 | 0.007080547 | X |
| 136319 | *MTPN* | myotrophin | 0.971538339 | 0.003353944 | O |
| 140809 | *SRXN1* | sulfiredoxin 1 | 0.603484319 | 0.007950088 | O |
| 143903 | *LAYN* | layilin | -0.597512713 | 0.005030915 | X |
| 144106 | *ST13P5* | ST13, Hsp70 interacting protein pseudogene 5 | -1.388318577 | 0.001925412 | X |
| 283450 | *HECTD4* | HECT domain E3 ubiquitin protein ligase 4 | 0.641111258 | 0.007142657 | X |
| 285220 | *EPHA6* | EPH receptor A6 | -0.187138019 | 0.078755561 | O |
| 285533 | *RNF175* | ring finger protein 175 | -0.950806978 | 0.003043393 | X |
| 319101 | *KRT73* | keratin 73 | 1.056162722 | 0.002794953 | X |
| 353288 | *KRT26* | keratin 26 | 0.238204003 | 0.06782419 | X |
| 374666 | *WASH3P* | WAS protein family homolog 3 pseudogene | 2.261343944 | 0.00031055 | X |
| 375260 | *WASH2P* | WAS protein family homolog 2 pseudogene | -1.87310696 | 0.001242201 | X |
| 388697 | *HRNR* | hornerin | 0.938289823 | 0.003478164 | X |
| 448834 | *KPRP* | keratinocyte proline rich protein | 1.555044301 | 0.000807431 | X |
| 644591 | *PPIAL4G* | peptidylprolyl isomerase A like 4G | 0.710383095 | 0.006024676 | X |
| 645142 | *PPIAL4D* | peptidylprolyl isomerase A like 4D | 0.710383095 | 0.006024676 | X |
| 653269 | *POTEI* | POTE ankyrin domain family member I | 0.67767446 | 0.006583667 | X |
| 653598 | *PPIAL4C* | peptidylprolyl isomerase A like 4C | 0.710383095 | 0.006024676 | X |
| 653781 | *POTEJ* | POTE ankyrin domain family member J | 0.67767446 | 0.006583667 | X |
| 728945 | *PPIAL4F* | peptidylprolyl isomerase A like 4F | 0.710383095 | 0.006024676 | X |
| 100037417 | *DDTL* | D-dopachrome tautomerase like | 0.764531806 | 0.005589906 | X |
| 102723897 | *WASH9P* | WAS protein family homolog 9, pseudogene | -1.87310696 | 0.001242201 | X |
| 105371242 | *PPIAL4H* | peptidylprolyl isomerase A like 4H | 0.710383095 | 0.006024676 | X |