

Table S1. Hypermethylated Gene Promoters in Skeletal Muscle of hSOD1-G37R^{mus} Transgenic Mice

| Gene | Promoter | Protein Name |
|----------|----------|---|
| Pi15 | LCP | peptidase inhibitor 15 |
| Tcfap2b | ICP | transcription factor AP-2-beta isoform 1 |
| Tcfap2b | ICP | transcription factor AP-2-beta isoform 2 |
| Kcnq5 | ICP | potassium voltage-gated channel subfamily KQT |
| Arhgef4 | ICP | rho guanine nucleotide exchange factor 4 |
| Mgat4a | LCP | alpha-1,3-mannosyl-glycoprotein |
| Aox4 | ICP | aldehyde oxidase 4 |
| Orc2 | LCP | origin recognition complex subunit 2 isoform B |
| Creb1 | HCP | cyclic AMP-responsive element-binding protein 1 |
| Speg | ICP | striated muscle-specific |
| Trip12 | HCP | thyroid hormone receptor interactor 12 |
| Alpl2 | LCP | embryonic-type alkaline phosphatase precursor |
| Ecel1 | ICP | endothelin-converting enzyme-like 1 |
| Fam132b | HCP | hypothetical protein LOC227358 precursor |
| Olf1411 | LCP | olfactory receptor 1411 |
| Pdcd1 | LCP | programmed cell death protein 1 precursor |
| Ptpn4 | HCP | tyrosine-protein phosphatase non-receptor type |
| Faim3 | LCP | fas apoptotic inhibitory molecule 3 precursor |
| Tnni1 | LCP | troponin I, slow skeletal muscle |
| Tnni1 | LCP | troponin I, slow skeletal muscle |
| Fmo2 | LCP | dimethylaniline monooxygenase [N-oxide-forming] |
| Pvrl4 | LCP | poliovirus receptor-related protein 4 isoform b |
| Tagln2 | ICP | transgelin-2 |
| Vsig8 | LCP | V-set immunoglobulin domain containing 8 |
| Sccpdh | HCP | probable saccharopine dehydrogenase |
| AA408296 | HCP | digestive organ expansion factor homolog |
| Syne1 | LCP | nesprin-1 isoform 1 |
| Iyd | LCP | iodotyrosine dehalogenase 1 precursor |
| Raet1d | LCP | retinoic acid early-inducible protein 1-delta |
| Taar2 | LCP | trace amine-associated receptor 2 |
| Taar4 | LCP | trace amine-associated receptor 4 |
| Taar5 | LCP | trace amine-associated receptor 5 |
| Smpd2 | HCP | sphingomyelin phosphodiesterase 2 |
| Bves | HCP | blood vessel epicardial substance |
| Edar | ICP | tumor necrosis factor receptor superfamily |
| Ccar1 | HCP | cell division cycle and apoptosis regulator |
| Rhobtb1 | ICP | rho-related BTB domain-containing protein 1 |
| Ccdc6 | HCP | coiled-coil domain-containing protein 6 |
| Col18a1 | ICP | collagen alpha-1(XVIII) chain isoform 2 |
| Lrrc3 | ICP | leucine-rich repeat-containing protein 3 |
| Mier2 | HCP | mesoderm induction early response protein 2 |
| Odf3l2 | LCP | outer dense fiber protein 3-like protein 2 |
| Kiss1r | ICP | kiSS-1 receptor |
| Sbno2 | HCP | protein strawberry notch homolog 2 |
| Sbno2 | HCP | protein strawberry notch homolog 2 |
| Adamts15 | ICP | ADAMTS-like protein 5 isoform 1 |
| Adamts15 | ICP | ADAMTS-like protein 5 isoform 2 |
| Mex3d | HCP | RNA-binding protein MEX3D |
| Csnk1g2 | LCP | casein kinase I isoform gamma-2 isoform 2 |

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|---------------|-----|---|
| Diras1 | ICP | GTP-binding protein Di-Ras1 |
| Ncln | HCP | nicalin precursor |
| Sirt6 | HCP | NAD-dependent deacetylase sirtuin-6 isoform 2 |
| Ankrd24 | LCP | ankyrin repeat domain-containing protein 24 |
| Timp3 | ICP | metalloproteinase inhibitor 3 precursor |
| Gli1 | ICP | zinc finger protein GLI1 |
| Nxph4 | HCP | neurexophilin 4 |
| Nab2 | HCP | NGFI-A-binding protein 2 isoform 2 |
| Myo1a | LCP | myosin-Ia |
| Rdh1 | LCP | retinol dehydrogenase 1 (all trans) |
| Sdr9c7 | LCP | short-chain dehydrogenase/reductase family 9C |
| Dnajc14 | HCP | dnaJ homolog subfamily C member 14 |
| 1110012D08Ril | ICP | hypothetical protein LOC73827 |
| Eif4enif1 | HCP | eukaryotic translation initiation factor 4E |
| Eif4enif1 | HCP | eukaryotic translation initiation factor 4E |
| Eif4enif1 | HCP | eukaryotic translation initiation factor 4E |
| Smtn | ICP | smoothelin |
| Zmiz2 | LCP | zinc finger MIZ domain-containing protein 2 |
| Tns3 | HCP | tensin-3 |
| Vps54 | HCP | vacuolar protein sorting-associated protein 54 |
| C1qtnf2 | ICP | complement C1q tumor necrosis factor-related |
| Irgm1 | ICP | immunity-related GTPase family M protein 1 |
| Olfr1387 | LCP | olfactory receptor 1387 |
| Scgb3a1 | LCP | secretoglobin family 3A member 1 type B |
| Agxt2l2 | HCP | alanine--glyoxylate aminotransferase 2-like 2 |
| Gjc2 | LCP | gap junction gamma-2 protein |
| Gjc2 | LCP | gap junction gamma-2 protein |
| Jmjd4 | HCP | jmjC domain-containing protein 4 |
| Tom1l2 | HCP | TOM1-like protein 2 isoform c |
| Lrrc48 | HCP | leucine-rich repeat-containing protein 48 |
| Aldh3a1 | LCP | aldehyde dehydrogenase, dimeric NADP-preferring |
| Myocd | ICP | myocardin isoform B |
| Vamp2 | HCP | vesicle-associated membrane protein 2 |
| Per1 | ICP | period circadian protein homolog 1 |
| Per1 | ICP | period circadian protein homolog 1 |
| Hes7 | LCP | transcription factor HES-7 |
| Cldn7 | LCP | claudin-7 |
| Cldn7 | ICP | claudin-7 |
| Alox15 | ICP | arachidonate 12-lipoxygenase, leukocyte-type |
| Chrne | LCP | acetylcholine receptor subunit epsilon |
| Gsg2 | HCP | serine/threonine-protein kinase haspin |
| Olfr412 | LCP | olfactory receptor 412 |
| Coro6 | LCP | coronin-6 isoform C |
| Rhot1 | HCP | mitochondrial Rho GTPase 1 isoform 1 |
| Slfn4 | ICP | schlafen 4 |
| Acaca | LCP | acetyl-CoA carboxylase 1 |
| Ppm1d | HCP | protein phosphatase 1D |
| Dhx40 | HCP | probable ATP-dependent RNA helicase DHX40 |
| Cuedc1 | HCP | CUE domain-containing protein 1 isoform 1 |

Figure S1

