Table S3. List of regulated proteins identified by pSILAC analysis in the absence of SMN

The proteins that are represented in red (highly significant) and blue (moderately significant) in the graph plot are represented in the bold and regular font, respectively. Note: The percentage of proteins left during the knockdown from duplicate experiments (1 and 2) is represented.

| Gene names | Full name                                                                 | norm.med. log2.Ratio. H.M.normalized.SM N_1 | norm.med. log2.Ratio. H.M.normalized.SM N_2 | Percentage of protein left during SMN KD compared with control_1 | Percentage of protein left during SMN KD compared with control_2 |
|------------|---------------------------------------------------------------------------|-----------------------------|-----------------------------|-------------------------------------------------|-------------------------------------------------|
| SMN1       | Survival motor neuron protein                                             | 2.72                        | 2.12                        | 15                                              | 23                                              |
| VIM        | Vimentin                                                                  | 2.15                        | 0.50                        | 23                                              | 70                                              |
| HNRPNC     | Heterogeneous nuclear ribonucleoproteins C1/C2                           | 2.09                        | 0.41                        | 24                                              | 75                                              |
| NPM1       | Nucleophosmin                                                             | 0.92                        | 0.30                        | 53                                              | 81                                              |
| ITPR3      | Inositol 1,4,5-trisphosphate receptor type 3                              | 0.88                        | 0.29                        | 54                                              | 82                                              |
| HNRNU      | Heterogeneous nuclear ribonucleoprotein U                                | 0.87                        | 0.20                        | 55                                              | 87                                              |
| DDX20      | Probable ATP-dependent RNA helicase DDX20                                 | 0.79                        | 0.93                        | 58                                              | 53                                              |
| L1CAM      | Neural cell adhesion molecule L1                                          | 0.68                        | 0.64                        | 62                                              | 64                                              |
| SUSD2      | Sushi domain-containing protein 2                                         | 0.68                        | 0.77                        | 63                                              | 59                                              |
| ASS1       | Argininosuccinate synthase                                                | 0.62                        | 0.19                        | 65                                              | 88                                              |
| ERLIN2     | Erlin-2                                                                   | 0.56                        | 0.84                        | 68                                              | 56                                              |
| TMEM43     | Transmembrane protein 43                                                  | 0.52                        | 0.61                        | 70                                              | 66                                              |
| SOAT1      | Sterol O-acyltransferase 1                                                | 0.51                        | 0.79                        | 70                                              | 58                                              |
| LBR        | Lamin-B receptor                                                          | 0.49                        | 0.67                        | 71                                              | 63                                              |
| NPEPPS     | Puromycin-sensitive aminopeptidase                                         | 0.45                        | 0.41                        | 73                                              | 75                                              |
| H2AFV      | Core histone macro-H2A.1;Histone H2A                                     | 2.06                        | 0.15                        | 24                                              | 90                                              |
| RBMX       | RNA-binding motif protein, X chromosome;RNA-binding motif protein, X chromosome, N-terminally processed | 1.75                        | 0.30                        | 30                                              | 81                                              |
| SIPA1      | Signal-induced proliferation-associated protein 1                         | 1.75                        | 0.13                        | 30                                              | 92                                              |
| Gene       | Description                                                                 | Ratio | P-value | FDR  | ID    |
|------------|-----------------------------------------------------------------------------|-------|---------|------|-------|
| HIST1H4A   | Histone H4                                                                  | 1.72  | 0.25    | 30   | 84    |
| SAP18      | Histone deacetylase complex subunit SAP18                                    | 1.65  | 0.16    | 32   | 89    |
| HIST2H2BE;HIST1H2BB;HIST1H2BO;HIST1H2BJ;HIST3H2BB | Histone H2B type 2-E;Histone H2B type 1-B;Histone H2B type 1-O;Histone H2B type 1-J;Histone H2B type 3-B | 1.60  | 0.12    | 33   | 92    |
| HIST1H3A   | Histone H3.1                                                                | 1.59  | 0.03    | 33   | 98    |
| HIST1H2BN;HIST1H2BM;HIST1H2BH;HIST2H2BF;HIST1H2BC;HIST1H2BD;HIST1H2BK;HIST1H2BL;H2BFS | Histone H2B;Histone H2B type 1-M;Histone H2B type 1-N;Histone H2B type 1-H;Histone H2B type 2-F;Histone H2B type 1-C/E/F/G/I;Histone H2B type 1-D;Histone H2B type 1-K;Histone H2B type 1-L;Histone H2B type F-S | 1.52  | 0.05    | 35   | 97    |
| ADAR       | Double-stranded RNA-specific adenosine deaminase                             | 1.52  | 0.11    | 35   | 93    |
| HIST2H2AC;HIST2H2AA3     | Histone H2A type 2-C;Histone H2A type 2-A                                  | 1.51  | 0.04    | 35   | 98    |
| RBM14      | RNA-binding protein 14                                                       | 1.50  | 0.11    | 35   | 93    |
| PLEC       | Plectin                                                                     | 1.47  | 0.16    | 36   | 89    |
| PNN        | Pinin                                                                       | 1.41  | 0.35    | 38   | 79    |
| PLEC       | Plectin                                                                     | 1.35  | 0.10    | 39   | 93    |
| IFI44L     | Interferon-induced protein 44-like                                           | 1.27  | 0.07    | 42   | 95    |
| SP3        | Transcription factor Sp3                                                     | 1.20  | 0.29    | 44   | 82    |
| THRAP3     | Thyroid hormone receptor-associated protein 3                               | 1.20  | 0.22    | 44   | 86    |
| Gene Symbol | Gene Name                                             | Fold Change | P-value | FDR   | Row Number |
|------------|-------------------------------------------------------|-------------|---------|-------|------------|
| THOC6      | THO complex subunit 6 homolog                         | 1.16        | 0.23    | 45    | 86         |
| POLDIP3    | Polymerase delta-interacting protein 3                | 1.13        | 0.06    | 46    | 96         |
| BCLAF1     | Bcl-2-associated transcription factor 1                | 1.10        | 0.08    | 46    | 94         |
| ERH        | Enhancer of rudimentary homolog                       | 1.03        | 0.03    | 49    | 98         |
| LAS1L      | Ribosomal biogenesis protein LAS1L                    | 1.02        | 0.29    | 49    | 82         |
| FABP3      | Fatty acid-binding protein, heart                     | 1.01        | 0.68    | 50    | 63         |
| HNRNPM     | Heterogeneous nuclear ribonucleoprotein M             | 0.99        | 0.16    | 50    | 90         |
| NUMA1      | Nuclear mitotic apparatus protein 1                   | 0.99        | 0.09    | 50    | 94         |
| DHX9       | ATP-dependent RNA helicase A                          | 0.98        | 0.18    | 51    | 89         |
| MKI67      | Antigen KI-67                                         | 0.96        | 0.16    | 51    | 89         |
| RBM3       | Putative RNA-binding protein 3                        | 0.93        | 0.23    | 52    | 85         |
| FIP1L1     | Pre-mRNA 3-end-processing factor FIP1                 | 0.93        | 0.11    | 53    | 92         |
| APOBEC3C   | DNA dC->dU-editing enzyme APOBEC-3C                   | 0.89        | 0.04    | 54    | 97         |
| ILF2       | Interleukin enhancer-binding factor 2                  | 0.89        | 0.16    | 54    | 90         |
| PPP1CC     | Serine/threonine-protein phosphatase;Serine/threonine-protein phosphatase PP1-gamma catalytic subunit | 0.87     | 0.27    | 55    | 83         |
| POLR1A     | DNA-directed RNA polymerase I subunit RPA1;DNA-directed RNA polymerase | 0.77     | 0.33    | 59    | 80         |
| ATP6V0A1   | V-type proton ATPase 116 kDa subunit a isoform 1       | 0.77        | 0.23    | 59    | 85         |
| SYNCRIPI   | Heterogeneous nuclear ribonucleoprotein Q             | 0.75        | 0.24    | 60    | 85         |
| NUP153     | Nuclear pore complex protein Nup153                   | 0.74        | 0.02    | 60    | 99         |
| WDR18      | WD repeat-containing protein 18                       | 0.71        | 0.19    | 61    | 88         |
| RANBP2     | E3 SUMO-protein ligase RanBP2                         | 0.68        | 0.19    | 62    | 88         |
| DEK        | Protein DEK                                           | 0.68        | 0.31    | 63    | 80         |
| NAT10      | N-acetyltransferase 10                                | 0.67        | 0.17    | 63    | 89         |
| FAM98A     | Protein FAM98A                                        | 0.67        | 0.07    | 63    | 95         |
| CTH        | Cystathionine gamma-lyase                             | 0.62        | 0.34    | 65    | 79         |
| COL6A1     | Collagen alpha-1(VI) chain                            | 0.61        | 0.50    | 66    | 70         |
| KHDRBS1    | KH domain-containing, RNA-binding, signal transduction-associated protein 1 | 0.61 | 0.03 | 66 | 98 |
| Gene Symbol | Description | Fold Change | q-value | Enrichment | Gene ID |
|-------------|-------------|-------------|---------|------------|---------|
| BAG2        | BAG family molecular chaperone regulator 2 | 0.60 | 0.28 | 66 | 82 |
| SRRM2       | Serine/arginine repetitive matrix protein 2 | 0.58 | 0.01 | 67 | 99 |
| LIMA1;TR    | LIM domain and actin-binding protein 1 | 0.57 | 0.08 | 67 | 94 |
| TGM2        | Protein-glutamine gamma-glutamyltransferase 2 | 0.55 | 0.33 | 68 | 80 |
| RPRD1B      | Regulation of nuclear pre-mRNA domain-containing protein 1B | 0.51 | 0.28 | 70 | 82 |
| LAPTM4A     | Lysosomal-associated transmembrane protein 4A | 0.50 | 0.68 | 71 | 62 |
| NAPRT       | Nicotinate phosphoribosyltransferase | 0.48 | 0.27 | 72 | 83 |
| SNTB2       | Beta-2-syntrophin | 0.48 | 0.48 | 72 | 72 |
| CAV1        | Caveolin-1,Caveolin | 0.46 | -0.01 | 73 | 101 |
| NUDT19      | Nucleoside diphosphate-linked moiety X motif 19, mitochondrial | 0.46 | 0.27 | 73 | 83 |
| ERLIN1      | Erlin-1 | 0.44 | 0.52 | 74 | 70 |
| ASPH        | Aspartyl/asparaginyl beta-hydroxylase | 0.42 | 0.32 | 75 | 80 |
| LGALS1      | Galectin-1 | 0.41 | 0.46 | 75 | 73 |
| ALDH1A3     | Aldehyde dehydrogenase family 1 member A3 | 0.39 | 0.32 | 77 | 80 |
| DDAH1       | N(G),N(G)-dimethylarginine dimethylaminohydrolase 1 | 0.38 | 0.27 | 77 | 83 |
| UGP2        | UTP--glucose-1-phosphate uridylyltransferase | 0.37 | 0.29 | 78 | 82 |
| OAS3        | 2-5-oligoadenylate synthase 3 | 0.35 | 0.24 | 78 | 85 |
| FDF1        | Squalene synthase | 0.30 | 0.43 | 81 | 74 |
| RPL7A       | 60S ribosomal protein L7a | 0.29 | 0.52 | 82 | 70 |
| KRT18       | Keratin, type I cytoskeletal 18 | 0.26 | 0.42 | 84 | 75 |
| FDPS        | Farnesyl pyrophosphate synthase | 0.22 | 0.32 | 86 | 80 |
| MT-CO2      | Cytochrome c oxidase subunit 2 | 0.18 | 0.63 | 88 | 65 |
| CENPH       | Centromere protein H | 0.11 | 0.80 | 93 | 57 |
| POLR3H      | DNA-directed RNA polymerase III subunit RPC8 | 0.05 | 0.82 | 96 | 57 |
| ACSL1       | Long-chain-fatty-acid--CoA ligase 1 | 0.04 | 1.18 | 98 | 44 |
| CHD1        | Chromodomain-helicase-DNA-binding protein 1 | -1.05 | -0.54 | 207 | 145 |
| ADAM9       | Disintegrin and metalloprotease domain-containing protein 9 | -0.90 | -1.08 | 187 | 212 |
| COL12A1     | Collagen alpha-1(XII) chain | -0.72 | -0.40 | 165 | 132 |
| GSN | Protein | Gelsolin | Fold Change | Fold Change | MACF1 | MACF1 |
|-----|---------|----------|-------------|-------------|-------|-------|
| MACF1 | Microtubule-Actin Crosslinking Factor 1 | -1.03 | -0.04 | 204 | 103 |
| PARP1 | Poly [ADP-ribose] polymerase 1 | -1.02 | -0.09 | 203 | 106 |
| SUPT16H | FACT complex subunit SPT16 | -0.88 | -0.18 | 184 | 113 |
| DST | Dystonin | -0.72 | -0.04 | 165 | 103 |
| CTSL | Cathepsin L1; Cathepsin L1 heavy chain; Cathepsin L1 light chain | -0.64 | -0.87 | 156 | 183 |
| DPYD | Dihydropyrimidine dehydrogenase [NADP(+)] | -0.64 | -0.15 | 155 | 111 |
| CTSC | Dipeptidyl peptidase 1; Dipeptidyl peptidase 1 exclusion domain chain; Dipeptidyl peptidase 1 heavy chain; Dipeptidyl peptidase 1 light chain | -0.51 | -0.34 | 142 | 126 |
| S100A2 | Protein S100-A2 | -0.46 | -0.35 | 138 | 127 |
| TRIM16 | Tripartite motif-containing protein 16 | -0.36 | -0.21 | 128 | 116 |
| SNCG | Gamma-synuclein | -0.33 | -0.20 | 126 | 115 |
| S100A14 | Protein S100-A14 | -0.23 | -0.78 | 117 | 171 |
Table S4. List of regulated proteins identified by pSILAC analysis in the absence of pICln

The proteins that are represented in red (highly significant) and blue (moderately significant) in the graph plot are represented in bold and regular font, respectively. Note: The percentage of proteins left during the knockdown from duplicate experiments (1 and 2) is represented.

| Gene names | Full name | norm.med.log2.Ratio. H.M.normalized.pICln _1 | norm.med.log2.Ratio. H.M.normalized.pICln _2 | Percentage of protein left during pICln KD compared with control_1 | Percentage of protein left during pICln KD compared with control_2 |
|------------|-----------|---------------------------------------------|---------------------------------------------|-------------------------------------------------|-------------------------------------------------|
| CLNS1A     | Chloride Channel, Nucleotide-Sensitive, 1A | 2.45                                        | 3.84                                        | 18                                              | 7                                               |
| SNRPD2     | Small Nuclear Ribonucleoprotein D1 Polypeptide 16kDa | 0.88                                        | 1.02                                        | 54                                              | 49                                              |
| SNRPD1     | Small Nuclear Ribonucleoprotein D2 Polypeptide 16.5kDa | 0.86                                        | 1.10                                        | 55                                              | 47                                              |
| SNRPD3     | Small Nuclear Ribonucleoprotein D3 Polypeptide 18kDa | 0.84                                        | 1.19                                        | 56                                              | 44                                              |
| MDN1       | Midasin AAA ATPase 1 | 0.87                                        | 0.74                                        | 55                                              | 60                                              |
| SNRPN;SNRPB | Small Nuclear Ribonucleoprotein Polypeptides B And B1 | 0.75                                        | 0.61                                        | 59                                              | 66                                              |
| REEP5      | Receptor Accessory Protein 5 | 0.56                                        | 0.76                                        | 68                                              | 59                                              |
| SPC24      | SPC24, NDC80 Kinetochore Complex Component | 0.48                                        | 1.02                                        | 72                                              | 49                                              |
| SNCA       | Synuclein, Alpha (Non A4 Component Of Amyloid Precursor) | 0.47                                        | 1.02                                        | 72                                              | 49                                              |
| HNRNPUL1   | Heterogeneous Nuclear Ribonucleoprotein U-Like 1 | 0.47                                        | 0.90                                        | 72                                              | 54                                              |
| DHFR       | Dihydrofolate Reductase | 0.42                                        | 0.60                                        | 75                                              | 66                                              |
| C16orf13   | Chromosome 16 Open Reading Frame 13 | 0.42                                        | 0.97                                        | 75                                              | 51                                              |
| PHB        | Prohibitin | 0.36                                        | 0.76                                        | 78                                              | 59                                              |
| PHB2       | Prohibitin 2 | 0.32                                        | 0.95                                        | 80                                              | 52                                              |
| KHSRP      | KH-Type Splicing Regulatory Protein | 0.32                                        | 0.87                                        | 80                                              | 55                                              |
| ENO3       | Enolase 3 (Beta, Muscle) | 0.25                                        | 1.18                                        | 84                                              | 44                                              |
| Gene  | Description                                                                 | fold change | FDR  | Gene  | Description                                                                 | fold change | FDR  |
|-------|-----------------------------------------------------------------------------|-------------|------|-------|-----------------------------------------------------------------------------|-------------|------|
| KRT18 | Keratin 18, Type I                                                          | 0.15        | 1.28 | 90    | 41                                                                          |
| COL5A1| Alpha 1 Type V Collagen                                                      | -1.12       | -1.23| 218   | 235                                                                         |
| TGM2  | Transglutaminase 2                                                          | -0.88       | -1.33| 184   | 252                                                                         |
| GALNT2| Polypeptide N-Acetylgalactosaminyltransferase 2                             | -0.85       | -0.66| 180   | 158                                                                         |
| DPYSL3| Dihydropyrimidinase-Like 3                                                 | -0.78       | -0.64| 172   | 156                                                                         |
| CD59  | CD59 Molecule, Complement Regulatory Protein                               | -0.44       | -1.39| 136   | 263                                                                         |
| SPTBN1| Spectrin, Non-Erythroid Beta Chain 1                                       | -0.93       | -2.40| 190   | 526                                                                         |
| ITGA11| Integran, Alpha 11                                                          | -0.78       | -0.59| 172   | 151                                                                         |
| MET   | MET Proto-Oncogene, Receptor Tyrosine Kinase                               | -0.78       | -0.32| 172   | 125                                                                         |
| PTPRF | Protein Tyrosine Phosphatase, Receptor Type, F                             | -0.76       | -0.36| 169   | 128                                                                         |
| ITGA5 | Integrin, Alpha 5 (Fibronectin Receptor, Alpha Polypeptide)                | -0.75       | -0.65| 168   | 157                                                                         |
| PHLDA3| Pleckstrin Homology-Like Domain, Family A, Member 3                         | -0.67       | -0.95| 160   | 193                                                                         |
| TIMP1 | Tissue Inhibitor Of Metalloproteinases 1                                   | -0.67       | -1.03| 159   | 205                                                                         |
| GALNT1| Polypeptide N-Acetylgalactosaminyltransferase 1                            | -0.65       | -0.58| 157   | 150                                                                         |
| ANXA3 | Annexin A3 (OR) Inositol 1,2-Cyclic Phosphate 2-Phosphohydrolase           | -0.63       | -0.39| 155   | 131                                                                         |
| PTGES | Prostaglandin E Synthase                                                    | -0.57       | -1.31| 148   | 247                                                                         |
| NCEH1 | Neutral Cholesterol Ester Hydrolase 1                                      | -0.53       | -0.88| 145   | 184                                                                         |
| GPRC5A| G Protein-Coupled Receptor, Class C, Group 5, Member A                      | -0.45       | -1.63| 136   | 309                                                                         |
| SERPINB5| Serpin Peptidase Inhibitor, Clade B (Ovalbumin), Member 5                 | -0.42       | -0.54| 133   | 145                                                                         |
| NT5E  | 5'-Nucleotidase, Ecto (CD73)                                                | -0.41       | -2.10| 133   | 429                                                                         |
| CBX5  | Chromobox Homolog 5                                                         | -0.39       | -1.06| 131   | 209                                                                         |
| FOLR1 | Folate Receptor 1 (Adult)                                                   | -0.31       | -1.24| 124   | 236                                                                         |