**Source data 1A. Top 30 nervous system processes targets of SP1**

|  |  |  |  |
| --- | --- | --- | --- |
| Pathways | Cortex | Striatum | aNSC |
| Cell movement of neurons |  |  |  |
| Neurodegeneration of brain |  |  |  |
| Neurodegeneration |  |  |  |
| Degeneration of CNS |  |  |  |
| Degeneration of NS |  |  |  |
| Proliferation of CNS |  |  |  |
| Proliferation of brain cells |  |  |  |
| Cell movement of brain cells |  |  |  |
| Neurodegeneration of neurites |  |  |  |
| Migration of neurons |  |  |  |
| Neurodegeneration of hippocampus |  |  |  |
| Outgrowth of axons |  |  |  |
| Growth of brain |  |  |  |
| Cell death of cerebral cortex cells |  |  |  |
| Growth of neurites |  |  |  |
| Outgrowth of neurites |  |  |  |
| Cell viability of tumor cell lines |  |  |  |
| Proliferation of neuronal cells |  |  |  |
| Growth of axons |  |  |  |
| Outgrowth of neurons |  |  |  |
| Outgrowth of cells |  |  |  |
| Cerebral cortical atrophy |  |  |  |
| Astrocytosis |  |  |  |
| Gliosis |  |  |  |
| Gliosis of brain |  |  |  |
| Cell death of tumor cell lines |  |  |  |
| Viability of neuroblastoma cell lines |  |  |  |
| Brain atrophy |  |  |  |
| Astrocytosis of brain |  |  |  |
| Synthesis of lipid |  |  |  |

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Log2 (Fold Change)

**Source data 1B. Top 30 differentially expressed SP1 target genes**



|  |  |  |
| --- | --- | --- |
| Genes | Cortex | Striatum |
| Gng4 |  |  |
| Flna |  |  |
| Tubb3 |  |  |
| Tmsb10 |  |  |
| Pfkp |  |  |
| Tgfb1i1 |  |  |
| Adam19 |  |  |
| Gap43 |  |  |
| Acsl5 |  |  |
| Slc20a1 |  |  |
| Gng3 |  |  |
| Miat |  |  |
| Hmgcs1 |  |  |
| Actb |  |  |
| Anp32a |  |  |
| Pcbp4 |  |  |
| Arhgdig |  |  |
| Dpysl2 |  |  |
| Uchl1 |  |  |
| **Stmn3** |  |  |
| Plcxd2 |  |  |
| Idh1 |  |  |
| Hmgcr |  |  |
| Tuba1a |  |  |
| Top2a |  |  |
| Lsm11 |  |  |
| Chd1l |  |  |
| Cdc42ep2 |  |  |
| **Stmn4** |  |  |
| Mob3a |  |  |

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Log2 (Fold Change)

**Source data 1C. Top 30 protein changes of SP1 targets**



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|  |  |
| --- | --- |
| Rab26 |  |
| Syt12 |  |
| **Stmn4** |  |
| Sh2d3c |  |
| Nefh |  |
| Rusc1 |  |
| Pgam2 |  |
| Pcmtd2 |  |
| Nefl |  |
| Nudt15 |  |
| Kpna2 |  |
| Padi2 |  |
| **Stmn2** |  |
| Nefm |  |
| Hmgcs1 |  |
| Fam173a |  |
| Srr |  |
| Sqle |  |
| Gng4 |  |
| Ric8a |  |
| Rasgrp2 |  |
| Olfml3 |  |
| Ptrhd1 |  |
| Phf20l1 |  |
| Atl1 |  |
| Cpped1 |  |
| **Stmn3** |  |
| Nrip3 |  |
| Ccdc184 |  |
| Rtn4 |  |

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Log2 (Fold Change)