

Table S1 DEPs in SC3d vs. SC0d group

Protein description	SC3d vs. SC0d ratio	Regulated type	P value	Gene name
Glutaminase kidney isoform, mitochondrial	0.71100	Down	0.04765	<i>Gls</i>
60S ribosomal protein L34	0.44400	Down	0.04185	<i>Rpl34</i>
Protein Itga8	0.44000	Down	0.04215	<i>Itga8</i>
Plexin domain containing 2	0.73467	Down	0.04335	<i>Plxdc2</i>
Eph receptor B3 (predicted)	0.69800	Down	0.01831	<i>Ephb3</i>
Protein Diras2	0.45800	Down	0.00900	<i>Diras2</i>
Protein Susd5	0.57533	Down	0.01300	<i>Susd5</i>
Protein RGD1559896	0.71967	Down	0.04529	<i>RGD1559896</i>
Condensin complex subunit 2	0.54250	Down	0.02576	<i>Ncapb</i>
Protein Itga11	0.56300	Down	0.04515	<i>Itga11</i>
Protein Afap1l2	0.51900	Down	0.03572	<i>Afap1l2</i>
Protein Col4a2	0.67600	Down	0.00375	<i>Col4a2</i>
Phospholipid phosphatase 1	0.58833	Down	0.00969	<i>Plpp1</i>
Matrix Gla protein	0.54667	Down	0.03961	<i>Mgp</i>
Stathmin	0.69700	Down	0.04281	<i>Stmn1</i>
Integrin alpha-1	0.54967	Down	0.03478	<i>Itga1</i>
Stathmin-2	0.74667	Down	0.01517	<i>Stmn2</i>
Myristoylated alanine-rich C-kinase substrate	0.62767	Down	0.04282	<i>Marcks</i>
Transporter	0.26800	Down	0.00953	<i>Slc6a6</i>
Methionine aminopeptidase 2	0.70000	Down	0.00082	<i>Metap2</i>
Thymosin beta-4	0.68800	Down	0.03182	<i>Tmsb4x</i>
60S ribosomal protein L24	0.44267	Down	0.02973	<i>Rpl24</i>
Chondroitin sulfate proteoglycan 4	0.67333	Down	0.00128	<i>Cspg4</i>
Phosphoserine phosphatase	0.56967	Down	0.04604	<i>Psp</i>
Integrin beta-like protein 1	0.70033	Down	0.01679	<i>Itgb1</i>
Fibulin-5	0.45667	Down	0.03592	<i>Fbln5</i>
Tropomyosin 1, alpha, isoform CRA_p	1.65967	Up	0.01491	<i>Tpm1</i>
Integrin alpha 5 (mapped)	1.37267	Up	0.04161	<i>Itga5</i>
Protein Nectin2	1.34850	Up	0.04349	<i>Nectin2</i>
Prkr interacting protein 1 (IL11 inducible)	1.48150	Up	0.04710	<i>Prkrip1</i>
Coactosin-like protein	2.90233	Up	0.04030	<i>Cotl1</i>
WD repeat-containing protein 91	1.48450	Up	0.01765	<i>Wdr91</i>
Niban-like protein 1	1.48400	Up	0.04661	<i>Fam129b</i>
Mothers against decapentaplegic homolog	1.34350	Up	0.02835	<i>Smad6</i>
Protein Uap1	2.80267	Up	0.03049	<i>Uap1</i>
Protein Tsen15	1.48933	Up	0.02722	<i>Tsen15</i>
Cytokine receptor-like factor 1 (predicted)	1.75767	Up	0.02096	<i>Crff1</i>
Protein Gla	1.35700	Up	0.00108	<i>Gla</i>
HD domain containing 2 (predicted), isoform CRA_b	1.78167	Up	0.00812	<i>Hddc2</i>
Protein Cenpv	1.31100	Up	0.00781	<i>Cenpv</i>
Procollagen, type VI, alpha 2, isoform CRA_a	1.37833	Up	0.03715	<i>Col6a2</i>
Lipid phosphate phosphatase-related protein type 2	22.67950	Up	0.02019	<i>Prg4</i>
Integrin alpha M	2.49167	Up	0.02136	<i>Itgam</i>
Proto-oncogene vav	2.08750	Up	0.00029	<i>Vav1</i>
Protein Znf2	1.37233	Up	0.04480	<i>Znf2</i>
Cyclin dependent kinase inhibitor	1.37900	Up	0.00609	<i>Cdkn1b</i>
Gremlin-1	1.49533	Up	0.02414	<i>Grem1</i>
Equilibrative nucleoside transporter 1	1.35100	Up	0.00267	<i>Slc29a1</i>
UDP-glucose 6-dehydrogenase	1.95333	Up	0.01789	<i>Ugdh</i>
Disabled homolog 2	1.83233	Up	0.04134	<i>Dab2</i>
Gamma-enolase	1.76000	Up	0.04039	<i>Eno2</i>
Superoxide dismutase [Mn], mitochondrial	2.82067	Up	0.02199	<i>Sod2</i>
Glutamine synthetase	1.34267	Up	0.02053	<i>Glul</i>
Lysophosphatidylcholine acyltransferase 2	1.57600	Up	0.01852	<i>Lpcat2</i>
Corticosteroid 11-beta-dehydrogenase isozyme 1	4.55200	Up	0.03443	<i>Hsd11b1</i>
Plasminogen activator inhibitor 1	1.85067	Up	0.03262	<i>Serpine1</i>
CD44 antigen	1.31333	Up	0.03845	<i>Cd44</i>
Hexokinase	3.93033	Up	0.02873	<i>Hk3</i>
Palmitoyl-protein thioesterase 1	1.70800	Up	0.00725	<i>Ppt1</i>
Desmin	1.54200	Up	0.03324	<i>Des</i>
Cellular retinoic acid-binding protein 2	2.53800	Up	0.01251	<i>Crabp2</i>
Growth factor receptor-bound protein 2	1.42300	Up	0.04777	<i>Grb2</i>
Cytochrome c oxidase subunit 7C, mitochondrial	1.58667	Up	0.02097	<i>Cox7c</i>
Ectonucleotide pyrophosphatase/phosphodiesterase family member 3	3.15700	Up	0.04419	<i>Enpp3</i>
Intercellular adhesion molecule 1	2.87400	Up	0.03069	<i>Icam1</i>
Cd68 molecule	5.77267	Up	0.04400	<i>Cd68</i>
Leukocyte elastase inhibitor A	1.77533	Up	0.01268	<i>Serpinc1a</i>
Paraspeckle component 1	1.32267	Up	0.02228	<i>Pspc1</i>
Protein FAM162A	2.25400	Up	0.03564	<i>Fam162a</i>
GTP-binding protein SAR1b	1.35400	Up	0.02242	<i>Sar1b</i>
Nicotinate-nucleotide pyrophosphorylase [carboxylating]	1.95367	Up	0.04248	<i>Qprt</i>
Solute carrier family 12 member 7	1.38633	Up	0.01164	<i>Slc12a7</i>
Sorting nexin-3	1.37367	Up	0.03758	<i>Snx3</i>
Cytochrome b ascorbate-dependent protein 3	1.41033	Up	0.00999	<i>Cyb561a3</i>
Protein Stom	2.34567	Up	0.03631	<i>Stom</i>
Alpha-N-acetylgalactosaminidase	1.56200	Up	0.04051	<i>Naga</i>
Protective protein for beta-galactosidase	1.79567	Up	0.01784	<i>Ctsa</i>
N(G),N(G)-dimethylarginine dimethylaminohydrolase 2	1.43833	Up	0.01664	<i>Ddah2</i>
Dolichyl-phosphate (UDP-N-acetylglucosamine) N-acetylglucosaminophosphotrans	1.48767	Up	0.01989	<i>Dpagt1</i>
Lactate dehydrogenase D, isoform CRA_d	1.45450	Up	0.01404	<i>Ldhd</i>
Optineurin	1.30067	Up	0.03192	<i>Optn</i>
Multidrug resistance protein 1a	1.43867	Up	0.00342	<i>Abcb1a</i>
Legumain	2.00133	Up	0.04686	<i>Lgmn</i>
Cathepsin Z	5.19367	Up	0.04529	<i>Ctsz</i>
Guanine deaminase	3.01567	Up	0.04549	<i>Gda</i>
Protein Tgm2	2.73533	Up	0.02991	<i>Tgm2</i>
Glutathione S-transferase Mu 5	1.43133	Up	0.03360	<i>Gstm5</i>

SC3d group: the BMSCs were cocultured with SCs for 3 days; SC0d group: the BMSCs were cultured alone. DEPs, differentially expressed proteins; BMSCs, bone marrow mesenchymal stem cells; SCs, Schwann cells.

Table S2 DEPs in SC7d vs. SC0d group

Protein description	SC7d vs. SC0d ratio	Regulated type	P value	Gene name
DNA helicase	0.64433	Down	0.00035	<i>Mcm6</i>
Septin-8	0.75900	Down	0.01255	<i>Sept8</i>
Protein Ewsr1	0.74200	Down	0.01354	<i>Ewsr1</i>
Protein Itga8	0.58800	Down	0.01627	<i>Itga8</i>
Leprecan-like 2 (predicted), isoform CRA_b	0.66333	Down	0.00672	<i>P3h3</i>
Histone H1.5	0.66367	Down	0.02966	<i>Hist1h1b</i>
Protein Diras2	0.62133	Down	0.02124	<i>Diras2</i>
Protein Susd5	0.66233	Down	0.00544	<i>Susd5</i>
Structural maintenance of chromosomes protein	0.76100	Down	0.01213	<i>Smc2</i>
Structural maintenance of chromosomes protein	0.75333	Down	0.00653	<i>Smc4</i>
Protein Cdh11	0.66233	Down	0.02628	<i>Cdh11</i>
Muscleblind-like protein 2	0.65867	Down	0.02806	<i>Mbnl2</i>
Histone H2B	0.73900	Down	0.00557	<i>Hist1h2bk</i>
Phospholipid phosphatase 1	0.43533	Down	0.01835	<i>Plpp1</i>
Fatty acid synthase	0.74567	Down	0.03194	<i>Fasn</i>
Stathmin	0.51767	Down	0.01136	<i>Stmn1</i>
Stathmin-2	0.55833	Down	0.00270	<i>Stmn2</i>
Myristoylated alanine-rich C-kinase substrate	0.59433	Down	0.02868	<i>Marcks</i>
Methionine aminopeptidase 2	0.73100	Down	0.04900	<i>Metap2</i>
Alanine-tRNA ligase, cytoplasmic	0.73233	Down	0.03662	<i>Aars</i>
High mobility group protein B2	0.49400	Down	0.01549	<i>Hmgb2</i>
Cellular nucleic acid-binding protein	0.75700	Down	0.02939	<i>Cnbp</i>
High mobility group protein B1	0.67900	Down	0.03216	<i>Hmgb1</i>
Cysteine-rich protein 1	0.44233	Down	0.01418	<i>Crip1</i>
Eukaryotic elongation factor 2 kinase	0.72167	Down	0.03912	<i>Eef2k</i>
LIM domain-containing protein 2	0.63933	Down	0.02997	<i>Limd2</i>
Phosphoserine phosphatase	0.62200	Down	0.02677	<i>Psph</i>
Procollagen-lysine, 2-oxoglutarate 5-dioxygenase 1	0.69833	Down	0.03888	<i>Plod1</i>
Eukaryotic translation initiation factor 1A	0.74600	Down	0.00742	<i>Eif1a</i>
Amino acid transporter	0.70567	Down	0.03963	<i>Slc1a4</i>
Heterogeneous nuclear ribonucleoprotein F	0.76667	Down	0.01818	<i>Hnrnpf</i>
Dihydrofolate reductase	0.51233	Down	0.02501	<i>Dhfr</i>
Caspase	0.70267	Down	0.03594	<i>Casp12</i>
RNA-binding protein 3	0.49867	Down	0.01137	<i>Rbm3</i>
Fibulin-5	0.56733	Down	0.03576	<i>Fbln5</i>
Tropomyosin 1, alpha, isoform CRA_p	1.58200	Up	0.04437	<i>Tpm1</i>
Protein Sqrdl	1.42967	Up	0.03004	<i>Sqrdl</i>
Protein Tcf25	1.39533	Up	0.04097	<i>Tcf25</i>
Fibronectin type III domain containing 3a (predicted), isoform CRA_a	1.30167	Up	0.04862	<i>Fndc3a</i>
Cytokine receptor-like factor 1 (predicted)	2.43633	Up	0.01100	<i>Crif1</i>
Protein Isca2	1.42500	Up	0.02853	<i>Isca2</i>
Protein Samd4b	1.37750	Up	0.03772	<i>Samd4b</i>
Protein Tns3	1.32400	Up	0.01805	<i>Tns3</i>
Protein Bag4	1.31900	Up	0.00740	<i>Bag4</i>
Protein Slc27a4	1.34433	Up	0.03870	<i>Slc27a4</i>
Protein Sowahc	1.40800	Up	0.02055	<i>Sowahc</i>
Guanine nucleotide-binding protein subunit beta-4	1.36900	Up	0.03348	<i>Gnb4</i>
Acyl-CoA thioesterase 2	1.30767	Up	0.00991	<i>Acot2</i>
Anionic trypsin-1	1.36967	Up	0.04309	<i>Prss1</i>
Glutathione peroxidase	1.31567	Up	0.02552	<i>Gpx1</i>
Catalase	1.32000	Up	0.01704	<i>Cat</i>
Lysophosphatidylcholine acyltransferase 2	1.30967	Up	0.00413	<i>Lpcat2</i>
Hemoglobin subunit beta-1	3.30833	Up	0.02940	<i>Hbb</i>
Interleukin 1 receptor antagonist, isoform CRA_c	1.99550	Up	0.00490	<i>Il1rn</i>
N(4)-(Beta-N-acetylglucosaminy)-L-asparaginase	1.93600	Up	0.00504	<i>Aga</i>
Tricarboxylate transport protein, mitochondrial	1.32767	Up	0.01994	<i>Slc25a1</i>
Syndecan-4	1.35200	Up	0.02499	<i>Sdc4</i>
Palmitoyl-protein thioesterase 1	1.37067	Up	0.01734	<i>Ppt1</i>
Cellular retinoic acid-binding protein 2	2.67167	Up	0.04130	<i>Crabp2</i>
ES1 protein homolog, mitochondrial	1.42033	Up	0.00328	<i>P56571</i>
Myotrophin	1.39833	Up	0.01201	<i>Mtpn</i>
D-2-hydroxyglutarate dehydrogenase, mitochondrial	1.66700	Up	0.04224	<i>D2hgdh</i>
ATP synthase F(0) complex subunit C1, mitochondrial	1.57667	Up	0.00117	<i>Atp5g1</i>
Testin	1.52800	Up	0.01224	<i>Tes</i>
GTP-binding protein SAR1b	1.39833	Up	0.04618	<i>Sar1b</i>
Eukaryotic initiation factor 4A-II	1.48100	Up	0.01698	<i>Eif4a2</i>
High-mobility group nucleosome binding domain 1	1.57300	Up	0.02981	<i>LOC100911295</i>
Nuclear factor of kappa light polypeptide gene enhancer in B-cells 2, p49/p100	1.44767	Up	0.03563	<i>Nfkb2</i>
Coenzyme A synthase	1.45367	Up	0.03440	<i>Coasy</i>
Integrin alpha-7	1.65333	Up	0.01732	<i>Itga7</i>
Podoplanin	1.65200	Up	0.03801	<i>Pdpn</i>
E3 ubiquitin-protein ligase RNF181	1.54700	Up	0.01510	<i>Rnf181</i>
N(G),N(G)-dimethylarginine dimethylaminohydrolase 2	1.41000	Up	0.00046	<i>Ddah2</i>
Glucosidase, alpha, acid, isoform CRA_a	1.33300	Up	0.03159	<i>Gaa</i>
Protein FAM198B	1.30200	Up	0.02176	<i>Fam198b</i>
Protein Serpinb6	1.30833	Up	0.04043	<i>Serpinb6</i>
Plectin	1.31933	Up	0.03953	<i>Plec</i>
Tripeptidyl-peptidase 1	1.35733	Up	0.02985	<i>Tpp1</i>
Neurogenic locus notch homolog protein 2	1.37433	Up	0.04579	<i>Notch2</i>
Vesicle-associated membrane protein-associated protein B	1.31700	Up	0.04825	<i>Vapb</i>

SC7d group: the BMSCs were cocultured with SCs for 7 days; SC0d group: the BMSCs were cultured alone. DEPs, differentially expressed proteins; BMSCs, bone marrow mesenchymal stem cells; SCs, Schwann cells.

Table S3 DEPs in SC7d vs. SC3d group

Protein description	SC7d vs. SC3d ratio	Regulated type	P value	Gene name
Protein P4ha2	0.50833	Down	0.04720	<i>P4ha2</i>
Protein Siglec1	0.51467	Down	0.02247	<i>Siglec1</i>
Neutrophil cytosol factor 2	0.39350	Down	0.04285	<i>Ncf2</i>
Coactosin-like protein	0.33667	Down	0.03072	<i>Cotl1</i>
Sorting nexin-5	0.75733	Down	0.04428	<i>Snx5</i>
Integrin beta	0.33600	Down	0.02822	<i>Itgb2</i>
Histone H1.5	0.60300	Down	0.02327	<i>Hist1h1b</i>
Asparagine-linked glycosylation 9 homolog (yeast, alpha 1,2 mannosyltransferase)	0.64767	Down	0.00322	<i>Alg9</i>
HD domain containing 2 (Predicted), isoform CRA_b	0.52533	Down	0.03018	<i>Hddc2</i>
Protein Rufy1	0.76600	Down	0.01504	<i>Rufy1</i>
Lipid phosphate phosphatase-related protein type 2	0.05500	Down	0.01129	<i>Prg4</i>
O-acyltransferase	0.64400	Down	0.04123	<i>Soat1</i>
Protein Cetn3	0.76033	Down	0.01911	<i>Cetn3</i>
Integrin alpha M	0.39633	Down	0.04183	<i>Itgam</i>
Histone H2B	0.73433	Down	0.03059	<i>Hist1h2bk</i>
Protein disulfide-isomerase	0.67767	Down	0.04143	<i>P4hb</i>
Superoxide dismutase [Mn], mitochondrial	0.55533	Down	0.01577	<i>Sod2</i>
Collagen alpha-1(III) chain	0.41067	Down	0.02311	<i>Col3a1</i>
Fcer1g protein	0.24900	Down	0.03637	<i>Fcer1g</i>
Cathepsin D	0.50833	Down	0.03169	<i>Ctsd</i>
Serpin H1	0.26500	Down	0.02638	<i>Serpinh1</i>
Alcohol dehydrogenase [NADP(+)]	0.74600	Down	0.03223	<i>Akr1a1</i>
Prolyl 4-hydroxylase subunit alpha-1	0.73567	Down	0.04625	<i>P4ha1</i>
Allograft inflammatory factor 1	0.17033	Down	0.00104	<i>Aif1</i>
40S ribosomal protein S15	0.76100	Down	0.00555	<i>Rps15</i>
Fatty acid-binding protein, adipocyte	0.14050	Down	0.01796	<i>Fabp4</i>
Proteasome subunit beta type-10	0.66967	Down	0.04877	<i>Psmb10</i>
Glutamine--fructose-6-phosphate aminotransferase [isomerizing] 2	0.59250	Down	0.04202	<i>Gfpt2</i>
Protein Arhgdib	0.24767	Down	0.02537	<i>Arhgdib</i>
Protein Lcp1	0.22267	Down	0.02696	<i>Lcp1</i>
Procollagen-lysine, 2-oxoglutarate 5-dioxygenase 1	0.60367	Down	0.03539	<i>Plod1</i>
Alpha-N-acetylgalactosaminidase	0.74233	Down	0.04984	<i>Naga</i>
Peptidyl-prolyl cis-trans isomerase FKBP9	0.74200	Down	0.04423	<i>Fkbp9</i>
Hematopoietic cell specific Lyn substrate 1	0.34200	Down	0.03622	<i>Hcls1</i>
N-myc downstream regulated gene 2, isoform CRA_b	0.71650	Down	0.02072	<i>Ndrp2</i>
Dihydrofolate reductase	0.60900	Down	0.00803	<i>Dhfr</i>
Cathepsin Z	0.21667	Down	0.04974	<i>Ctsz</i>
Protein Sqrdl	1.44067	Up	0.04138	<i>Sqrdl</i>
Ethylmalonic encephalopathy 1	1.32433	Up	0.04756	<i>Ethe1</i>
Protein Zc2hc1a	1.35133	Up	0.03204	<i>Zc2hc1a</i>
Protein Isca2	1.31900	Up	0.00986	<i>Isca2</i>
Protein Dysf	1.38967	Up	0.02960	<i>Dysf</i>
Protein Arhgef5	1.54733	Up	0.04640	<i>Arhgef5</i>
Sorbin and SH3 domain-containing protein 1	1.44400	Up	0.01781	<i>Sorbs1</i>
Actin filament-associated protein 1	1.30867	Up	0.01104	<i>Afap1</i>
Carboxypeptidase E	1.49400	Up	0.01201	<i>Cpe</i>
PDZ and LIM domain protein 1	1.34967	Up	0.03252	<i>Pdlim1</i>
Fibroblast growth factor 1	1.46867	Up	0.02477	<i>Fgf1</i>
Visinin-like protein 1	2.15033	Up	0.01830	<i>Vsnl1</i>
Calponin-1	1.48567	Up	0.02286	<i>Cnn1</i>
Lysophosphatidylcholine acyltransferase 1	1.42900	Up	0.01995	<i>Lpcat1</i>
Protein Tjp2	1.40733	Up	0.01788	<i>Tjp2</i>
Probable 2-oxoglutarate dehydrogenase E1 component DHKTD1, mitochondrial	1.32150	Up	0.02809	<i>Dhtkd1</i>
Eukaryotic initiation factor 4A-II	1.35433	Up	0.02116	<i>Eif4a2</i>
Protein Serpinb9	1.89467	Up	0.04737	<i>Serpinb9</i>
Calcium uptake protein 1, mitochondrial	1.52450	Up	0.01470	<i>Micu1</i>

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