

Table S7. Related to Figure S3A (right). 119 differential expression genes in four clusters of mRNAseq of SPN-13, which are consistent with differential expression genes in scRNAseq of SPN-13.

Gene symbol	CLST1_1	CLST1_2	CLST2_1	CLST2_2	CLST3_1	CLST3_2	CLST4_1	CLST4_2
COL17A1	400.868754	391.03235	303.318901	303.585724	241.950363	250.684653	276.040549	255.229115
HADHA	104.645495	105.351688	98.099596	98.652713	83.249495	88.210795	91.083748	92.338346
TIMP1	472.486784	490.351434	274.001532	277.281194	201.969267	207.104482	434.48228	404.767141
NDRG1	305.283357	328.907762	199.381161	199.438099	215.261515	225.318872	286.040849	304.815805
CA9	59.494999	59.141065	16.047901	17.442031	16.718857	15.41815	56.198348	51.679205
HADHB	73.168254	73.708297	69.053313	66.821671	65.450721	60.624557	64.358076	64.224132
EIF3H	282.266228	237.818296	229.791661	243.201617	226.764031	240.092212	238.249006	195.888523
ALDOA	1916.105169	1829.572251	1789.143026	1768.10914	1624.636231	1674.782409	1703.812039	1561.004016
ADAMTS1	99.288147	110.12507	72.778563	72.870219	67.143533	67.346622	64.808503	61.769524
EIF4A1	698.337887	683.991928	533.259419	534.013936	563.365466	573.07671	430.033948	413.89676
HSP90B1	814.411699	748.125071	675.583138	671.954332	492.389582	513.098032	480.994792	463.015652
PPIB	490.447882	509.665298	407.76098	398.769059	399.221025	385.820991	345.37613	345.26939
PDIA3	433.337751	410.00306	390.10633	387.830697	321.824983	323.027036	398.228367	336.767749
SLC3A2	1055.695846	944.620156	735.266559	724.658584	691.932165	790.152269	445.49946	422.644562
EIF1	708.123682	712.732336	639.282136	617.729602	642.23049	628.36226	659.697036	688.546813
SFN	1366.058291	1313.903176	1140.038991	1145.770851	1180.260632	1286.120405	1172.348009	1169.724042
ZFAS1	549.954154	466.583227	450.033364	415.877937	446.135918	418.947573	483.234209	372.984499
IMPDH2	206.113246	190.438281	182.000813	185.426818	170.144606	167.672016	113.614233	110.959929
NPM1	2240.366917	1864.932574	1538.824578	1636.631792	1685.451963	1698.074851	1344.193833	933.120503
KRT14	3586.278729	3614.310668	3162.892253	3164.987194	3028.537671	3312.398547	3252.318064	3387.4784
NAP1L1	261.433585	248.176443	240.62183	242.407291	193.828184	201.327138	157.781896	133.593086
S100A4	147.631616	158.684501	106.536512	104.394558	101.791163	91.94412	101.536597	114.517183
S100A2	16583.90839	16734.18555	15179.25581	15112.45212	15604.70943	15226.38119	12591.64825	13282.44128
AKR1B10	41.433191	41.348589	23.257861	24.329202	17.974866	18.641435	6.679098	7.58164
TPM2	63.656095	59.078571	47.631183	49.988558	27.482542	27.014005	11.956601	10.566922
RAET1G	44.742555	42.534108	27.289903	29.212172	31.735589	33.618827	18.1997	17.564646
SERPINB5	373.980534	353.200937	213.532323	218.567762	300.636447	293.43548	244.518899	232.624939
B4GALT1	38.266488	36.94386	43.984167	43.521471	26.421771	28.260174	41.212051	39.654507
BIRC5	43.232927	39.456977	48.577484	48.079309	23.690552	26.022971	17.004039	13.992854
CLSPN	9.064672	10.169577	12.119399	13.294593	6.683422	6.159535	3.28191	3.87976
TNRC6B	5.340758	4.52651	6.532929	6.923057	6.275374	4.524428	5.788471	6.094013
CDKN3	48.955043	52.570353	63.301879	60.72654	34.588787	32.237336	17.462612	18.216322
MYBL2	13.117199	13.169065	15.266853	15.248832	10.208119	11.368861	3.500698	3.993873
OAZ1	737.343005	826.959702	966.965684	945.878528	840.514028	932.731348	679.85258	741.995344
H2AFV	152.846527	160.187199	195.771432	189.720053	116.830273	124.23244	77.263283	82.87528
CACYBP	132.949921	130.377782	138.002918	142.340988	102.889645	112.105704	65.252476	73.359548
ICMT	50.836331	53.269969	65.43883	67.41241	50.290748	48.40954	38.478894	40.492624
PHF19	37.221793	36.085732	50.346793	48.20252	23.353269	25.760432	16.63173	17.208457
GTF3A	58.879391	60.612011	65.201582	64.050396	61.976911	58.445144	39.885817	38.112169
DEK	81.543602	77.316953	104.331325	96.570308	54.197184	53.675735	41.136387	41.884622
LSM4	192.365365	164.713602	190.715642	194.910902	157.836348	166.028273	127.911099	115.040021
RIN2	15.747262	18.08301	23.017992	22.424126	16.055419	16.61096	20.856083	22.020322
CDK4	99.216164	108.059253	122.126058	119.528382	103.158384	101.650538	42.127041	56.238214
NABP2	38.043192	29.021027	39.135534	39.11594	31.254097	26.768478	21.622308	23.256532

TP53	24.438978	25.09263	57.436462	59.041073	26.668666	30.700725	27.589914	28.485716
ANP32E	35.398562	31.719228	35.210381	37.408642	21.879478	25.267993	15.102409	16.580474
CISD2	29.213626	25.589783	29.73774	30.456129	25.51079	25.800106	20.740094	18.54307
SSRP1	91.579839	89.441914	96.356041	96.661403	73.548668	73.122914	45.566594	42.558656
ZDHC12	57.263661	50.93311	63.768883	68.320322	52.981798	47.827135	38.350684	38.238378
SPC24	6.361009	7.650132	10.958673	10.253793	6.607793	6.965932	2.945319	4.1912
TRA2A	75.768237	79.466386	91.874521	84.223858	70.694849	79.42064	53.083243	54.709675
FAM96A	73.876517	70.401841	98.399455	92.567767	74.226649	76.777672	60.322092	62.404081
SAC3D1	6.513316	6.486254	10.202032	9.544354	6.053776	6.960878	5.347346	4.165518
DTYMK	57.518304	54.7802	64.571616	63.507641	47.950123	46.966828	30.765798	30.084332
TOR1AIP2	16.09456	13.603149	20.346298	19.840524	19.066888	18.922652	18.690929	19.014332
COPRS	38.52547	38.889035	45.73856	42.246876	37.361233	35.010537	24.679578	23.81865
YIF1A	117.620534	109.987283	115.983604	124.498138	104.744265	120.129792	87.957546	85.756898
CTDNEP1	48.923433	50.869249	54.783104	54.300626	46.413994	42.803178	42.078951	37.697889
TYMS	82.093197	78.66592	100.55862	100.034351	54.488231	53.959306	29.541905	30.928284
R3HDM2	13.311878	13.517453	22.78127	17.028742	14.488398	15.052765	15.309988	13.424662
DCTPP1	70.486813	70.364991	82.554689	81.942866	70.00944	75.022065	42.208803	45.359917
TCEA1	61.809605	65.019487	76.123077	72.286092	66.087868	63.411656	45.969391	46.716918
CD47	86.908177	84.488752	101.11992	98.585569	60.12424	59.56848	95.579369	89.170999
PDGFA	6.685244	7.256895	13.007466	12.431231	10.635022	11.228839	8.131043	9.61014
HMG2	413.690953	392.162047	463.355184	452.781227	322.822796	330.144275	192.396864	183.504514
LSM2	51.626909	55.973918	68.983428	68.781852	46.769649	45.604557	30.548423	33.10971
APOBEC3C	38.608065	38.424706	44.850774	44.986587	28.56841	28.056032	34.043342	29.231888
EPPK1	9.454887	8.454932	9.423295	9.607271	6.887293	6.839031	8.145939	8.150747
RDH11	26.578105	28.832582	42.308077	42.641563	53.243032	54.091226	48.877621	46.531969
FDFT1	65.595025	70.067281	132.808565	133.013301	227.131391	245.838662	207.494084	206.921942
SCD	40.294907	37.970952	144.626112	140.867936	175.268835	175.649703	148.440971	140.450279
SLC25A1	22.801451	23.310182	42.386327	41.611416	49.66727	55.226022	38.375763	34.057797
SQLE	27.356999	25.758611	34.981332	34.395459	63.212906	62.444778	53.104148	47.255507
TMEM97	5.363651	5.5981	7.890322	7.66943	11.418478	9.620914	3.800984	4.017223
MVK	9.988108	9.846013	31.025213	26.510177	34.504885	34.841137	28.479619	30.043779
HMGCS1	28.990416	27.171471	39.794755	39.166952	118.462189	114.73685	73.626768	76.067417
HMGCR	49.122109	55.138103	62.960482	57.337106	105.050425	115.850292	79.427168	86.118162
ACAT2	14.391381	13.963336	30.660527	26.735236	50.75549	52.805868	40.800916	39.560361
ACLY	51.471129	51.390681	68.672606	67.625338	108.725318	109.837187	67.93532	64.692383
EBP	58.942795	75.584572	96.399429	89.431828	106.061354	113.911478	74.185535	71.223698
FDPS	100.839267	93.383163	156.897604	147.529032	208.475305	199.958909	176.92373	155.894173
MVD	33.192316	22.928942	52.89002	62.213593	118.005791	112.974051	65.203137	66.086975
FASN	42.872834	44.367471	83.097326	73.83016	130.635493	133.367958	82.971975	74.986027
DHCR7	20.790061	19.813054	53.417885	59.191811	109.318992	126.539541	71.234005	76.768448
PGP	13.676214	12.862322	15.892376	17.376764	17.208674	18.501265	12.801272	13.734963
PCYT2	17.126166	16.244574	21.068882	21.708796	33.84903	36.566422	19.812546	19.860793
INSIG1	4.655443	4.107956	8.106202	9.397929	16.717826	16.729913	12.669362	11.356854
CXCL8	163.704147	174.707562	164.920654	159.758897	124.318581	117.980008	800.228319	792.137294
HS3ST1	14.171063	14.040641	6.956935	5.141439	6.89432	7.078775	16.120797	14.930033
PLAUR	51.467899	56.199936	39.811091	39.371879	24.603577	23.124007	86.911994	78.650813
BID	76.265959	65.803336	61.07856	64.950889	73.18145	69.144511	110.149114	103.924556

BIRC3	22.152643	22.605473	19.808302	21.379123	12.359115	12.183519	52.518705	52.199858
MAP2K3	48.653646	50.155941	39.029837	39.083536	44.62926	43.734842	62.927284	62.887996
TRAM1	138.299683	138.097772	150.188046	151.564564	190.779227	193.279822	214.807503	221.591467
MST4	15.509475	14.143353	9.332494	9.479178	11.70547	14.281607	14.613382	18.620292
TRAF4	105.995345	99.366964	92.259453	92.476219	70.524542	80.541168	144.490931	143.906696
NFKBIA	95.342725	88.656589	96.543786	93.224113	49.550692	48.250745	186.002697	179.582298
SNX3	117.715966	124.599232	127.0249	127.541324	129.37745	126.008377	142.105259	137.550303
CCND3	76.262175	76.168	78.788249	86.667846	71.550971	76.750068	93.843167	91.955307
HBEGF	117.524623	117.211642	29.517966	29.49205	35.329526	31.247573	179.996479	178.927641
CCL20	49.918444	51.685159	21.981888	22.995001	74.220824	68.023581	779.493417	799.415434
TNFAIP3	81.056883	76.797391	35.582247	37.381218	32.70621	28.008875	152.118854	130.971561
PLAU	155.332113	153.900219	109.585676	108.875987	110.190335	102.849808	271.245474	276.288853
CDC42EP1	33.227636	28.42979	41.757047	42.009577	29.473969	31.218402	65.822465	61.21705
RAC1	247.361053	227.598832	217.653508	238.552662	220.568066	223.073548	282.478104	267.767295
PIM1	35.965284	37.120645	29.832087	28.975439	28.567063	28.157154	59.415167	62.223394
TPM1	104.69145	108.300731	200.573409	182.52714	177.852226	174.477967	283.648026	284.234251
TINAGL1	245.293382	268.24106	285.726424	289.622696	193.662164	205.626947	334.413001	342.230892
TNIP1	78.462525	79.143762	91.02998	87.966005	95.631576	93.694026	160.386493	159.325967
IFNGR2	56.00336	55.514914	47.572918	44.523744	46.022716	44.584119	63.545598	59.686177
CSTB	701.925959	683.095264	845.53944	852.046344	886.854177	896.656522	1521.18668	1344.226593
CXCL16	34.460828	35.211063	44.902892	45.919721	33.082622	30.325699	70.848872	66.465628
CLDN1	88.466399	93.084478	162.119576	160.741546	134.239052	134.699965	247.086135	239.920161
CXCL1	101.177784	102.251319	81.44851	84.770341	32.344178	31.558878	271.672969	265.475694
CEBPB	18.721496	20.476951	24.628668	22.684091	19.242993	20.225185	34.173772	30.713903
PTP4A2	213.95806	229.392968	220.246727	234.390804	231.451403	242.382411	302.04735	318.115992
UBE2F	36.295944	32.686454	27.595373	26.603182	34.398679	35.039848	44.408186	37.080667
SPATS2L	91.254907	95.848271	141.696796	141.842016	118.541445	112.518447	186.63559	190.174782
PIM3	23.59662	21.826477	26.684984	27.130932	21.802359	23.122381	33.955008	30.869349