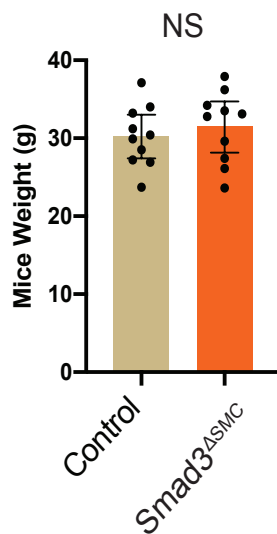
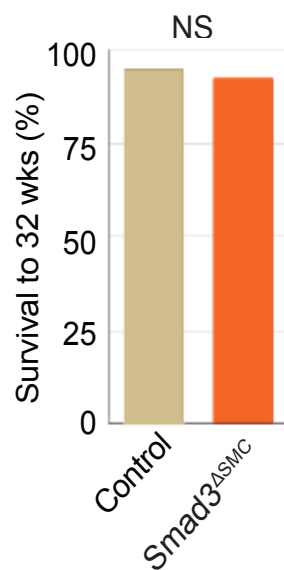


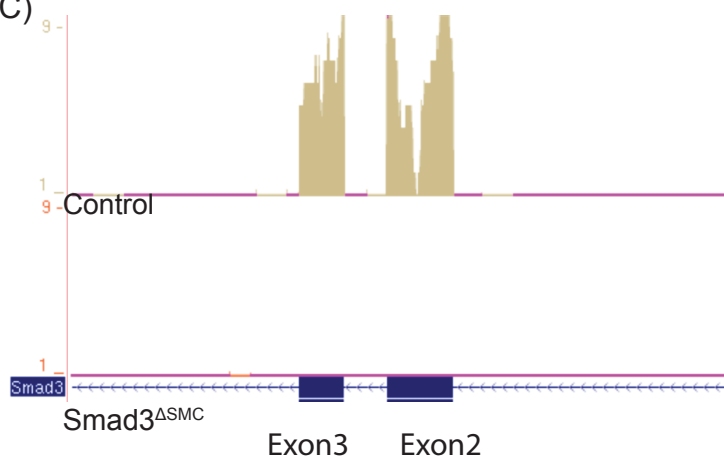
A)



B)

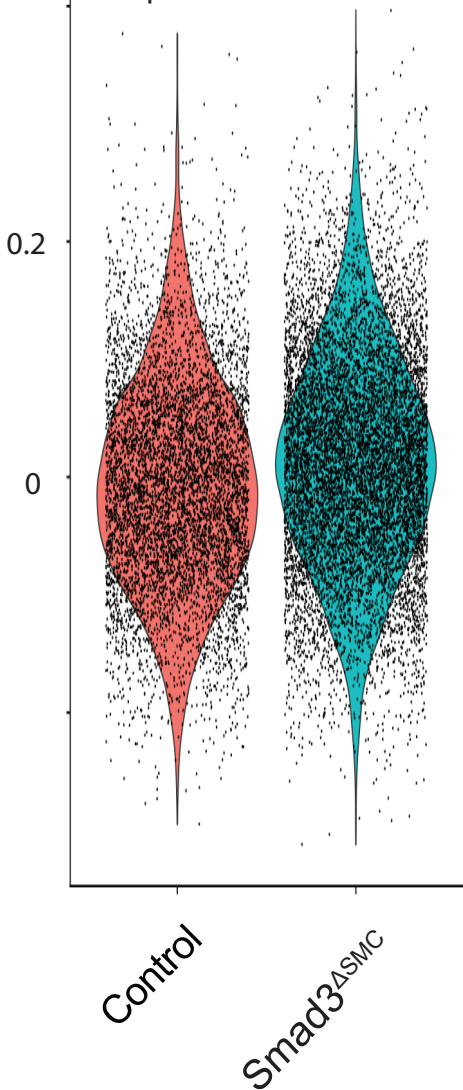


C)



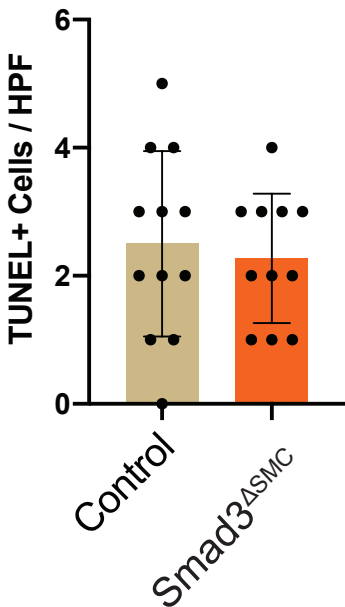
Mesenchymal Proliferation Score

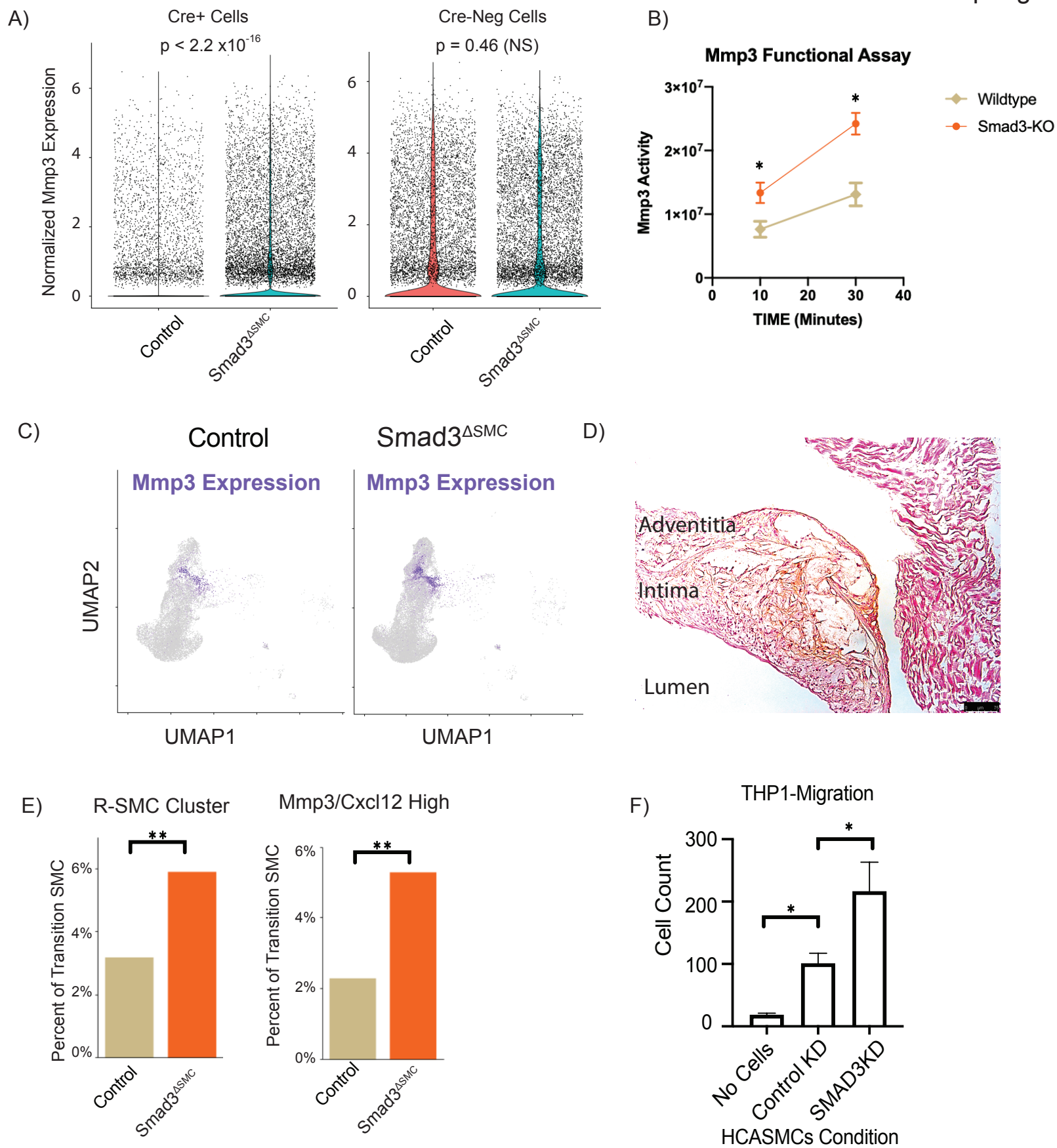
$p < 2.6 \times 10^{-16}$



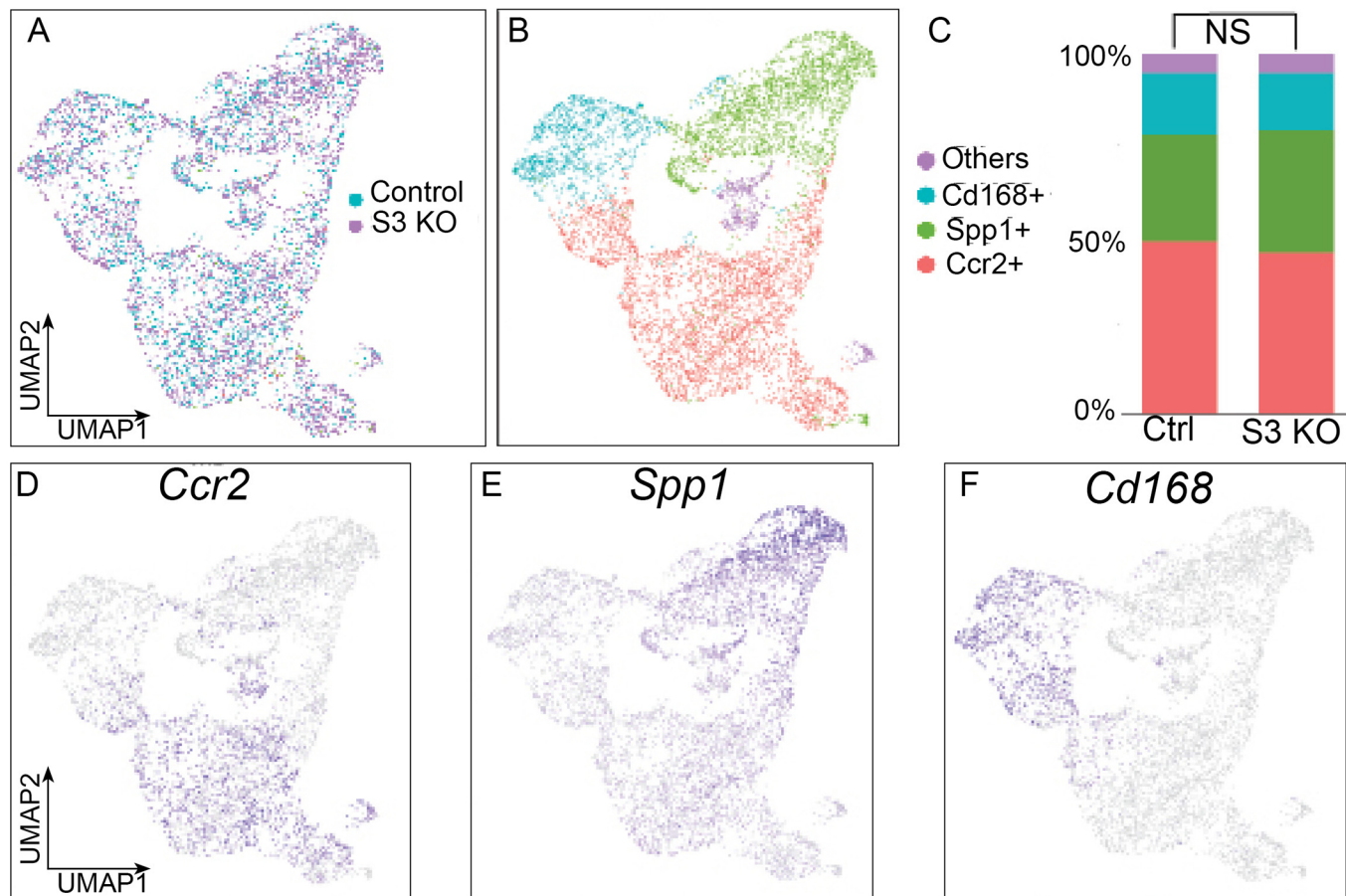
Sup Fig 3

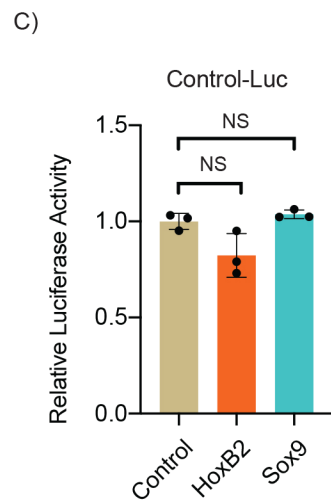
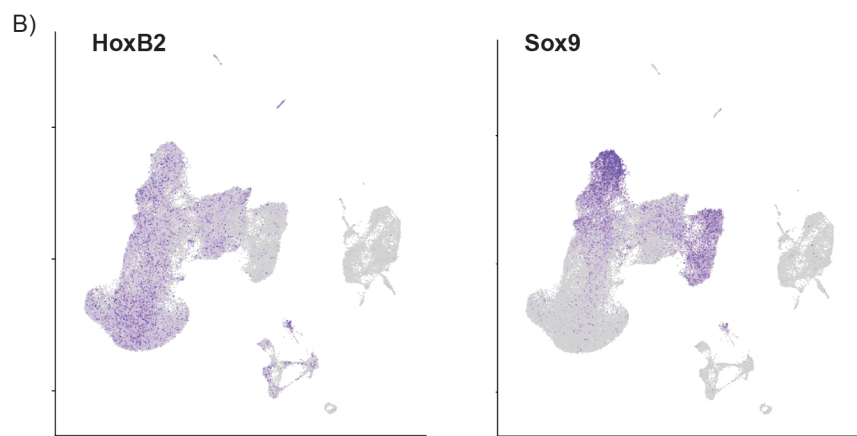
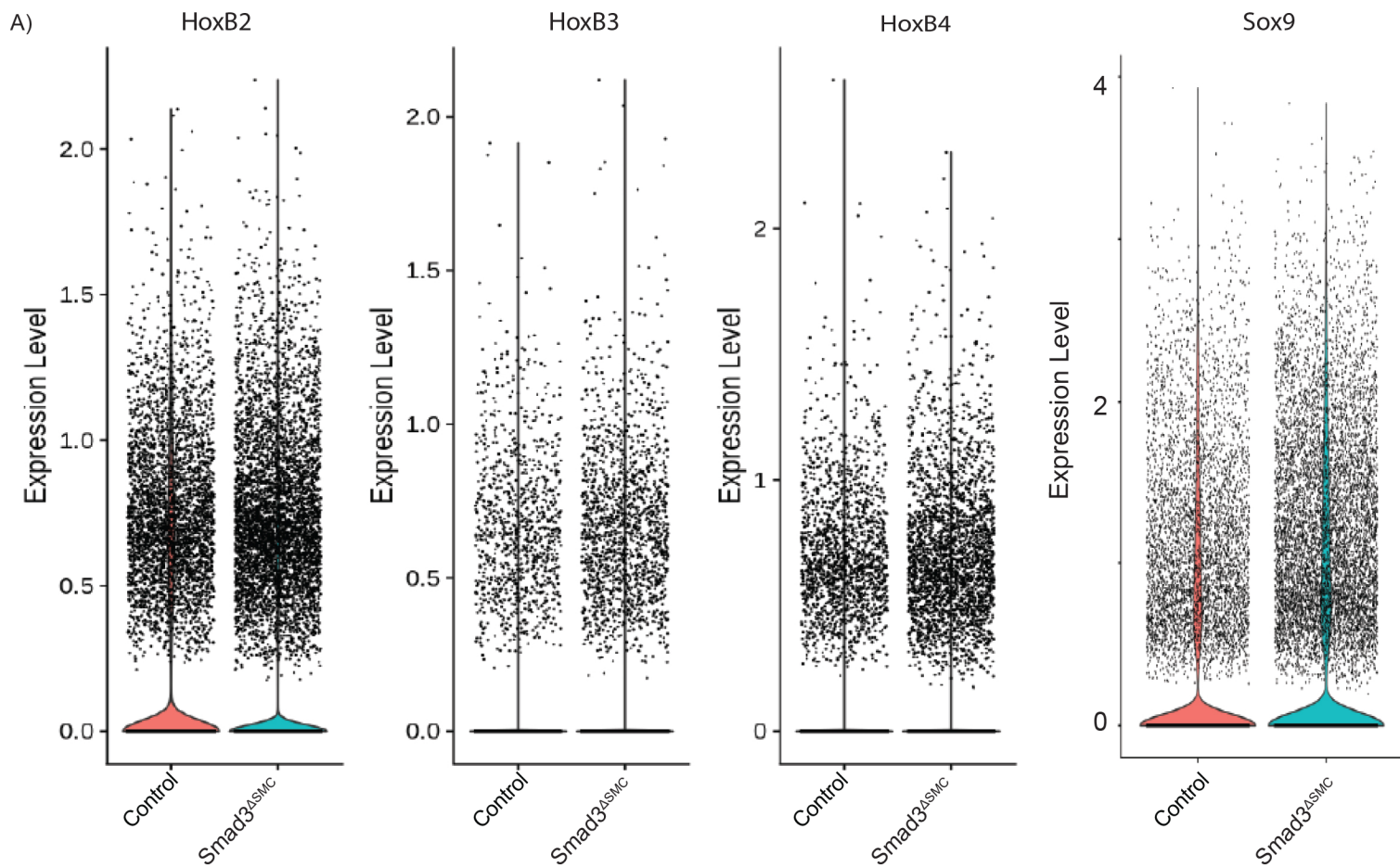
TUNEL Positive Cells





Sup Fig 5





Blot: Anti-Smad3 IgG



Empty Vector	+	-	Transfection
Flag-SOX9	-	+	

Anti-Flag
IP Antibody

Sup Table 1			
Gene Name	pValue	Log2 fold change	Adjusted pValue
Mmp3	0.00E+00	2.5093142	0.00E+00
Saa3	9.82E-71	1.0627398	1.70E-66
C3	7.54E-138	0.8491226	1.30E-133
Serpina3n	4.26E-108	0.8267676	7.36E-104
Ifi2712a	3.35E-28	0.8224405	5.80E-24
Dpt	2.43E-97	0.7317364	4.21E-93
Cxcl12	2.77E-82	0.7313986	4.79E-78
Fbln1	1.58E-103	0.713777	2.73E-99
Gpm6b	3.29E-118	0.698891	5.68E-114
Serping1	3.86E-113	0.694924	6.68E-109
Lcn2	9.97E-55	0.6111536	1.72E-50
H2-K1	5.97E-60	0.5655865	1.03E-55
H2-D1	2.03E-82	0.562061	3.50E-78
Igfbp4	5.12E-78	0.5526911	8.85E-74
Gda	4.99E-115	0.5259702	8.62E-111
Ly6a	5.44E-45	0.5195238	9.41E-41
Ccl2	8.39E-40	0.5138952	1.45E-35
Ifitm3	1.25E-109	0.5049463	2.16E-105
C4b	4.43E-47	0.4985657	7.65E-43
Gas6	2.13E-58	0.4982682	3.67E-54
Timp1	1.29E-49	0.4980057	2.22E-45
Tgfbi	7.90E-65	0.4973525	1.37E-60
Lbp	5.35E-35	0.491857	9.26E-31
Vcam1	5.12E-76	0.4873571	8.86E-72
Ndufa412	5.08E-37	0.4854987	8.78E-33
B2m	4.45E-68	0.4537743	7.69E-64
Adamts5	2.83E-39	0.4531387	4.89E-35
Ch11	6.65E-94	0.4511266	1.15E-89
Cxcl1	9.19E-21	0.4468436	1.59E-16
Cxcl16	3.19E-74	0.4414459	5.52E-70
Cxcl2	4.66E-20	0.4348281	8.05E-16
H2-T23	4.26E-77	0.4300307	7.36E-73
Mgst1	3.80E-77	0.428389	6.56E-73
Hsd11b1	2.04E-95	0.4253896	3.53E-91
Cxcl5	2.35E-74	0.4224984	4.06E-70
Lrg1	8.92E-40	0.4187654	1.54E-35
Bicc1	2.32E-59	0.4152245	4.02E-55
Cfh	1.91E-62	0.4147788	3.30E-58

Ccl17	3.54E-49	0.4135225	6.12E-45
Cygb	4.42E-40	0.4120342	7.65E-36
Plpp3	1.50E-56	0.4115887	2.59E-52
Tmem176b	1.61E-75	0.409538	2.78E-71
Igfbp5	3.67E-10	0.4094799	6.35E-06
Ctsl	5.72E-79	0.4094582	9.89E-75
Tmem176a	8.12E-64	0.4071653	1.40E-59
Prg4	7.62E-35	0.4036553	1.32E-30
1110008P14Rik	5.28E-52	0.4031272	9.13E-48
Fndc1	6.28E-67	0.4021181	1.09E-62
Slurp1	4.25E-07	0.4017752	7.34E-03
Bst2	2.34E-45	0.4002749	4.04E-41
Bok	4.56E-64	0.3992843	7.89E-60
Sod2	1.18E-38	0.396681	2.03E-34
Dclk1	4.01E-50	0.392034	6.93E-46
Col3a1	5.04E-39	0.3799311	8.72E-35
Ccl19	4.48E-59	0.3791501	7.75E-55
Pnp	1.51E-53	0.375071	2.61E-49
Npc2	8.51E-49	0.3708344	1.47E-44
Clqtnf7	3.25E-29	0.3674996	5.61E-25
Lum	1.85E-51	0.3670671	3.20E-47
Efemp1	2.47E-38	0.3638256	4.27E-34
Scarb2	3.77E-50	0.3520306	6.52E-46
Il33	7.88E-68	0.348253	1.36E-63
Clra	2.83E-55	0.3462929	4.89E-51
Fbln2	2.30E-45	0.3456965	3.97E-41
Ptn	2.58E-16	0.3437285	4.46E-12
Abi3bp	8.40E-20	0.3428149	1.45E-15
Nbl1	2.80E-44	0.3403921	4.84E-40
Vcan	5.76E-34	0.3399171	9.95E-30
Lgmn	5.29E-49	0.3355248	9.15E-45
Pdgfra	2.49E-50	0.3349834	4.30E-46
Serpinf1	3.75E-24	0.3286263	6.48E-20
Col14a1	6.28E-36	0.3263793	1.09E-31
Cp	2.34E-48	0.3236481	4.04E-44
Mt2	4.90E-30	0.3232727	8.47E-26
Nnmt	1.97E-52	0.317973	3.40E-48
Rnase4	2.95E-49	0.3142951	5.10E-45
Mt1	7.22E-35	0.3118053	1.25E-30
Psmb8	3.15E-40	0.3108936	5.44E-36

Marcks	7.24E-44	0.3106889	1.25E-39
Ngf	1.74E-74	0.309882	3.00E-70
Adamts2	5.55E-51	0.3084979	9.60E-47
Sdc1	3.48E-37	0.3084277	6.01E-33
Cd47	5.66E-55	0.3083075	9.79E-51
Dcn	2.13E-33	0.3074491	3.69E-29
Ly6e	1.90E-31	0.3058162	3.29E-27
Gm12840	9.09E-29	0.3043711	1.57E-24
Plvap	4.03E-51	0.3043594	6.96E-47
Col6a3	5.35E-14	0.3032102	9.25E-10
Lrp1	3.98E-50	0.3031871	6.87E-46
Man2a1	4.57E-36	0.3016453	7.89E-32
H2-Q7	2.26E-59	0.29569	3.91E-55
Acp5	8.48E-46	0.2925391	1.47E-41
C1s1	9.58E-43	0.2908273	1.66E-38
Ifitm2	2.00E-67	0.287842	3.46E-63
Nupr1	8.33E-25	0.2872453	1.44E-20
Cyp1b1	4.57E-52	0.28547	7.91E-48
Slc43a3	1.17E-34	0.2845558	2.02E-30
Ly6c1	1.95E-23	0.2838117	3.37E-19
Isg15	4.74E-21	0.2821435	8.19E-17
Ltbp2	2.97E-26	0.2784524	5.13E-22
Tmem140	2.32E-35	0.2746712	4.01E-31
Arpc3	2.26E-45	0.2724957	3.90E-41
Olfml3	3.60E-32	0.2698542	6.22E-28
Mif	5.56E-36	0.2690018	9.61E-32
Cd55	4.01E-67	0.268617	6.93E-63
Cpxm1	1.63E-25	0.2611231	2.82E-21
Cd44	1.16E-27	0.2609432	2.01E-23
Pcolce	4.49E-25	0.2599504	7.76E-21
Mmp14	8.75E-29	0.2583022	1.51E-24
Wisp2	6.55E-10	0.2568399	1.13E-05
Crabp2	6.59E-11	0.2565964	1.14E-06
Iigp1	4.07E-26	0.2552041	7.04E-22
Ctsk	6.47E-20	0.2529987	1.12E-15
Sncg	1.97E-26	0.2511151	3.40E-22
Sh3bgr	3.32E-13	-0.2540941	5.74E-09
Mylk	2.16E-09	-0.2645104	3.73E-05
Cdkn1a	1.93E-08	-0.2658736	3.33E-04
Myl6	4.24E-07	-0.267568	7.33E-03

Tns1	1.49E-14	-0.2698362	2.57E-10
Wwp2	8.29E-29	-0.2726847	1.43E-24
Cdc42ep3	3.95E-22	-0.273681	6.83E-18
Ecm2	8.94E-26	-0.2740339	1.55E-21
Mtus2	7.08E-28	-0.2760626	1.22E-23
Hspb1	1.87E-15	-0.2768716	3.24E-11
Mef2c	5.05E-29	-0.2786953	8.73E-25
Tinagl1	3.09E-18	-0.2790932	5.34E-14
Ppp1r14a	2.00E-09	-0.279553	3.46E-05
Ogn	6.99E-12	-0.2855283	1.21E-07
Ank	5.34E-12	-0.288652	9.23E-08
Csrp1	1.70E-13	-0.2967798	2.95E-09
Xylt1	9.53E-18	-0.2976401	1.65E-13
Dstn	9.11E-14	-0.2990371	1.58E-09
Lmod1	9.09E-14	-0.2993823	1.57E-09
Flna	2.23E-12	-0.3110868	3.86E-08
Serpine1	3.96E-14	-0.3191657	6.85E-10
Fabp4	8.98E-17	-0.3205993	1.55E-12
Tpm1	5.35E-10	-0.3206055	9.24E-06
Cpe	1.04E-45	-0.3245956	1.79E-41
A230065H16Rik	7.01E-25	-0.3250574	1.21E-20
Rcan2	1.01E-33	-0.3310783	1.75E-29
Ctgf	2.89E-25	-0.3337993	4.99E-21
Sox9	9.38E-08	-0.335943	1.62E-03
Sost	1.30E-14	-0.3394633	2.24E-10
Sparcl1	1.99E-19	-0.3484468	3.44E-15
Cspg4	4.38E-43	-0.3580945	7.57E-39
Id1	3.38E-24	-0.3675721	5.83E-20
Rarres1	1.01E-07	-0.3709149	1.74E-03
Timp3	2.26E-28	-0.3785865	3.91E-24
Tpm2	2.14E-07	-0.3868523	3.70E-03
Fzd9	1.37E-27	-0.3977707	2.37E-23
Serpine2	3.00E-29	-0.3989916	5.19E-25
Npnt	1.31E-24	-0.3997119	2.27E-20
Cnn1	2.91E-16	-0.4001991	5.03E-12
Tcap	3.26E-12	-0.4002329	5.64E-08
Itga8	1.96E-20	-0.4191136	3.38E-16
Col27a1	6.91E-08	-0.4258097	1.19E-03
Rbp4	7.45E-17	-0.434075	1.29E-12
Acta2	5.10E-09	-0.4439387	8.81E-05

My19	4.69E-14	-0.4537801	8.10E-10
Col18a1	1.88E-33	-0.4600504	3.24E-29
Igfbp2	1.03E-08	-0.4755964	1.78E-04
Tagln	2.49E-15	-0.4836062	4.30E-11
Postn	1.37E-23	-0.4944677	2.37E-19
Wif1	1.94E-19	-0.4973463	3.35E-15
Myh11	1.05E-20	-0.504071	1.82E-16
Susd5	1.45E-70	-0.526134	2.51E-66
Ramp1	3.82E-52	-0.5516916	6.60E-48
Col9a3	1.23E-25	-0.5708129	2.13E-21
Gdf10	1.52E-28	-0.5812687	2.62E-24
Omd	1.16E-17	-0.6543081	2.01E-13
Cst3	3.79E-07	-0.6605848	6.55E-03
Pcolce2	2.21E-13	-0.6784201	3.82E-09
Sparc	7.81E-14	-0.6808391	1.35E-09
Col11a2	6.49E-32	-0.6814941	1.12E-27
Crispld1	7.31E-22	-0.685185	1.26E-17
Mfge8	5.64E-35	-0.6908736	9.75E-31
Hapln1	1.03E-23	-0.7080611	1.79E-19
Tnfrsf11b	5.34E-38	-0.7175249	9.23E-34
Eln	4.18E-14	-0.7876896	7.22E-10
Fibin	1.92E-43	-0.7902726	3.31E-39
Fmod	1.16E-15	-0.8887562	2.01E-11
Acan	5.27E-48	-1.0113114	9.10E-44
Chad	2.70E-19	-1.0597214	4.67E-15
Comp	1.14E-09	-1.3746665	1.97E-05
Cyt11	1.52E-32	-1.8224266	2.63E-28
Spp1	6.02E-16	-2.0645257	1.04E-11
Col2a1	9.41E-26	-2.8091149	1.63E-21
Ibsp	1.30E-15	-2.8446822	2.24E-11

Sup Table 2

Gene Name	pValue	Log2 fold change	Adjusted pValue
Eln	5.91E-255	-0.8527335	1.02E-250
Csrp2	6.11E-263	-0.6835382	1.06E-258
Mfap4	2.75E-187	-0.6497973	4.75E-183
Crlf1	4.62E-197	-0.5178736	7.98E-193
Pmepa1	0.00E+00	-0.4871309	0.00E+00
Rbp4	3.90E-93	-0.460835	6.74E-89
Fblim1	1.06E-165	-0.4308582	1.83E-161
Sost	9.04E-112	-0.4167636	1.56E-107
Postn	2.35E-149	-0.4104325	4.06E-145
2210407C18Rik	3.98E-99	-0.3900663	6.88E-95
Itga8	2.43E-104	-0.3757096	4.20E-100
Acta2	1.31E-99	-0.3746811	2.27E-95
Tagln	1.00E-98	-0.3692385	1.74E-94
Fmo2	1.43E-101	-0.3654595	2.48E-97
Fgl2	6.40E-94	-0.3637612	1.11E-89
Myl9	7.23E-76	-0.3637203	1.25E-71
Rbp1	1.98E-215	-0.3604808	3.43E-211
Mfap5	1.60E-73	-0.3580179	2.77E-69
Tmsb4x	2.46E-140	-0.3569363	4.25E-136
Lox	1.14E-140	-0.3495555	1.97E-136
Myh11	7.42E-73	-0.3466337	1.28E-68
Dstn	4.14E-104	-0.334778	7.15E-100
Tpm2	1.87E-91	-0.3346026	3.23E-87
Ogn	1.46E-89	-0.3331531	2.53E-85
Col18a1	2.48E-154	-0.3316127	4.29E-150
Cnn1	2.30E-69	-0.3290522	3.98E-65
Ppp1r14a	2.93E-78	-0.3258514	5.06E-74
Npnt	5.81E-113	-0.3232408	1.01E-108
Cald1	3.79E-164	-0.3182313	6.56E-160
Ltbp1	6.57E-146	-0.31547	1.14E-141
Myl6	1.40E-121	-0.313378	2.42E-117
Itga9	3.93E-140	-0.3103533	6.80E-136
Hspb1	1.57E-121	-0.3074337	2.71E-117
Tpm1	2.69E-100	-0.3022842	4.65E-96
Myh10	1.42E-124	-0.295501	2.45E-120
Tnnt2	2.47E-70	-0.2858778	4.27E-66
Lox11	2.00E-132	-0.2853445	3.45E-128
Smoc2	3.92E-58	-0.2840111	6.78E-54

Tcap	1.82E-70	-0.2839331	3.15E-66
Nox4	1.69E-139	-0.2814312	2.92E-135
Hsph1	1.47E-171	-0.2798922	2.54E-167
Actn1	4.75E-122	-0.2752233	8.20E-118
Sh3bgr	5.70E-78	-0.2749449	9.85E-74
Manf	1.44E-155	-0.2740757	2.49E-151
Cd59a	3.15E-163	-0.2721621	5.44E-159
Sparcl1	5.77E-46	-0.2707496	9.97E-42
Nov	2.49E-56	-0.2698069	4.30E-52
Ncam1	2.74E-83	-0.266171	4.74E-79
Hspa5	8.77E-170	-0.2632624	1.52E-165
Lmod1	2.58E-84	-0.2563759	4.46E-80
Fstl1	9.44E-124	-0.2541988	1.63E-119
Igfbp7	3.81E-229	-0.2529464	6.59E-225
Fmod	2.44E-34	0.2523255	4.22E-30
Enpp2	9.16E-47	0.2630828	1.58E-42
Cst6	9.35E-54	0.2641815	1.62E-49
Cox4i2	7.34E-82	0.2692889	1.27E-77
Mgp	7.88E-72	0.270864	1.36E-67
Fn1	2.30E-73	0.2714765	3.98E-69
Ifi2712a	8.77E-24	0.2735748	1.52E-19
Cxcl2	1.47E-23	0.2767769	2.54E-19
Rarres1	4.33E-48	0.2952427	7.48E-44
C3	1.74E-113	0.2994775	3.01E-109
Cst3	1.21E-51	0.3093403	2.08E-47
Clu	1.53E-86	0.3252958	2.64E-82
Penk	2.06E-17	0.3381997	3.56E-13
Cxcl1	4.98E-32	0.3412264	8.60E-28
Hapln1	5.29E-30	0.3476833	9.15E-26
Spp1	8.19E-156	0.3516182	1.42E-151
Pltp	2.32E-148	0.3548785	4.02E-144
Ly6a	3.30E-71	0.3611491	5.70E-67
Cyt11	3.26E-34	0.3655385	5.64E-30
Slurp1	1.90E-35	0.3732543	3.28E-31
Dcn	9.06E-187	0.4443564	1.57E-182
Serpina3n	1.72E-181	0.4619119	2.97E-177
Lgals3	1.03E-258	0.4809042	1.79E-254
Lbp	4.99E-135	0.5143945	8.63E-131
Lcn2	1.78E-69	0.5766949	3.08E-65
Prg4	1.39E-178	0.6070485	2.40E-174

Hp	1.07E-40	0.6244417	1.86E-36
Mmp3	8.77E-147	0.7062137	1.52E-142
Ibsp	7.51E-59	0.7256068	1.30E-54
Ndufa4l2	5.80E-226	0.7892072	1.00E-221
Chil1	1.21E-43	1.0488313	2.08E-39