

SUPPLEMENTARY INFORMATION

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Locally renewing resident synovial macrophages provide a protective barrier for the joint

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Supplementary Table 1: Marker genes of clusters of scRNA-seq data of sorted synovial CD45⁺Cd11b⁺Ly6G⁻ mononuclear phagocytes during steady

Differentially expressed genes were identified using the Wilcoxon Rank Sum test. Adjusted p-values based on Bonferroni correction using all genes in the dataset. n=7362 cells.

gene	p_val	avg_logFC	p_val_adj	cluster
Aqp1	2,08E-126	0,6736365	1,60E-122	0
Fxyd2	9,21E-117	0,5703077	7,08E-113	0
Тррр3	6,33E-76	0,531636	4,87E-72	0
Cd9	5,34E-68	0,3820029	4,11E-64	0
Lyve1	4,71E-33	0,3407805	3,63E-29	0
Anxa1	6,94E-33	0,3828428	5,34E-29	0
Cyb5r3	3,85E-18	0,3480845	2,96E-14	0
Ifi27l2a	7,85E-18	0,3258748	6,04E-14	0
H2-Ab1	0	1,3123438	0	1
H2-Eb1	0	1,2994284	0	1
H2-Aa	0	1,2754512	0	1
Cd74	0	1,2564388	0	1
H2-DMa	6,07E-178	1,0761156	4,67E-174	1
Cd52	3,26E-128	0,8869993	2,51E-124	1
Mgl2	1,18E-103	0,8693339	9,09E-100	1
S100a11	1,79E-32	0,4324623	1,38E-28	1
Gm2a	9,77E-23	0,3715456	7,52E-19	1
Lsp1	2,60E-17	0,3379984	2,00E-13	1
Coro1a	1,50E-16	0,3294116	1,16E-12	1
Pim1	3,46E-15	0,2763688	2,67E-11	1
Retnla	6,93E-12	0,2607837	5,33E-08	1
Clec4a2	2,98E-11	0,2630623	2,30E-07	1
Ccl8	8,91E-142	1,1374496	6,86E-138	2
Ccl2	1,54E-128	0,9616653	1,19E-124	2
Ccl7	9,39E-117	1,1044551	7,22E-113	2
Cxcl2	3,55E-97	0,9394747	2,73E-93	2
Dusp1	2,99E-79	0,6288709	2,30E-75	2
Zfp36	1,63E-78	0,7146728	1,26E-74	2
Junb	9,58E-70	0,5732462	7,37E-66	2
Pf4	2,63E-68	0,3012539	2,03E-64	2
Fos	2,19E-64	0,5065967	1,69E-60	2
Atf3	5,18E-61	0,6610085	3,99E-57	2
Mt1	6,69E-59	0,4704272	5,15E-55	2
ler3	1,99E-54	0,6134144	1,53E-50	2
Ccl4	2,98E-45	0,7144859	2,30E-41	2
Nfkbia	2,77E-42	0,5056772	2,13E-38	2
Retnla	1,94E-40	0,5362326	1,49E-36	2
Ccl24	9,89E-40	0,553219	7,61E-36	2

Marcksl1	7,71E-37	0,5512683	5,93E-33	2
Cxcl13	1,42E-36	0,7281834	1,09E-32	2
Jun	1,75E-35	0,4773535	1,35E-31	2
Ccl3	6,74E-34	0,5196627	5,18E-30	2
Mt2	7,36E-27	0,4592874	5,66E-23	2
Klf6	6,45E-26	0,361174	4,96E-22	2
Pim1	1,63E-22	0,4248209	1,25E-18	2
Ccl6	2,15E-22	0,289203	1,65E-18	2
Ifitm3	5,86E-21	0,3947271	4,51E-17	2
Cd83	1,69E-20	0,4418688	1,30E-16	2
Btg2	1,49E-17	0,3903928	1,14E-13	2
Klf4	3,33E-17	0,3584172	2,56E-13	2
Hspa1a	5,42E-16	0,3506177	4,17E-12	2
Ubc	2,87E-14	0,2802804	2,21E-10	2
ler2	3,30E-13	0,3135671	2,54E-09	2
Mrc1	8,83E-13	0,2681005	6,79E-09	2
Mcl1	7,76E-11	0,2839753	5,97E-07	2
Maf	6,37E-10	0,2606169	4,90E-06	2
Vsig4	4,40E-201	0,8613897	3,39E-197	3
Sparc	2,19E-178	0,9223244	1,69E-174	3
Ctsd	6,78E-167	0,7790815	5,22E-163	3
Lyz2	3,16E-142	0,3679368	2,43E-138	3
Srgn	5,64E-133	0,6431507	4,34E-129	3
S100b	6,10E-114	0,9235882	4,69E-110	3
Fn1	1,48E-104	0,7875353	1,14E-100	3
TdTomato	3,36E-101	0,6282756	2,58E-97	3
Apoe	1,59E-82	0,4970414	1,22E-78	3
Wfdc17	1,85E-61	0,3771949	1,43E-57	3
Hexb	4,49E-53	0,5332315	3,45E-49	3
Nupr1	1,52E-48	0,5209451	1,17E-44	3
Grn	1,41E-39	0,3273935	1,08E-35	3
Ltc4s	9,73E-30	0,4091973	7,49E-26	3
Trem2	6,08E-26	0,3027722	4,68E-22	3
Syngr1	7,69E-25	0,4302726	5,91E-21	3
Cd68	8,63E-20	0,2854543	6,64E-16	3
Folr2	3,43E-19	0,2723361	2,64E-15	3
Tmem37	1,45E-18	0,3606988	1,12E-14	3
Camk1	4,37E-18	0,3407961	3,36E-14	3
Pltp	1,11E-16	0,2589247	8,54E-13	3
Timp2	5,52E-16	0,2881948	4,25E-12	3
Nfkbia	3,28E-15	0,2785373	2,52E-11	3
Cd83	1,55E-12	0,2532039	1,19E-08	3
Ccl3	1,05E-11	0,3282611	8,04E-08	3

Cbr2	2,40E-10	0,2831758	1,85E-06	3
Man2b1	3,07E-10	0,2506817	2,36E-06	3
Stmn1	0	1,9883782	0	4
Ube2c	0	1,5257583	0	4
Birc5	0	1,5035044	0	4
Tubb5	1,91E-90	1,1612494	1,47E-86	4
Hmgb2	4,02E-84	1,3042904	3,09E-80	4
Tuba1b	1,19E-51	0,9465081	9,16E-48	4
Tubb4b	9,46E-51	0,9793549	7,28E-47	4
Ptma	2,27E-41	0,6109267	1,75E-37	4
H2afz	8,42E-41	0,7556469	6,48E-37	4
Vim	6,50E-20	0,3351131	5,00E-16	4
Tuba1c	8,21E-20	0,686901	6,32E-16	4
S100a10	1,68E-19	0,3718145	1,29E-15	4
Ran	2,19E-19	0,6049653	1,69E-15	4
Tmsb10	3,32E-19	0,7790258	2,56E-15	4
Hmgb1	1,70E-18	0,5692362	1,31E-14	4
Rbm3	2,71E-15	0,4156219	2,09E-11	4
Jpt1	6,26E-15	0,5551576	4,81E-11	4
Txn1	9,75E-14	0,3903175	7,50E-10	4
S100a11	1,20E-13	0,4070792	9,24E-10	4
Arl6ip1	6,53E-13	0,5886488	5,02E-09	4
Pkm	5,57E-12	0,4473849	4,28E-08	4
Tagln2	9,40E-12	0,4175422	7,23E-08	4
Lgals1	1,37E-09	0,2828733	1,06E-05	4
Anxa2	1,66E-09	0,2961342	1,28E-05	4
Nme1	8,69E-09	0,3816342	6,69E-05	4
Gapdh	9,22E-09	0,2811553	7,09E-05	4
Anxa1	1,04E-08	0,32088	8,01E-05	4
Ranbp1	1,88E-08	0,4794453	0,0001444	4
Lgals3	3,11E-08	0,3503709	0,0002393	4
Slc25a5	9,81E-08	0,2985713	0,0007546	4
Hnrnpa3	3,08E-07	0,3332675	0,0023683	4
Snrpe	9,18E-07	0,3444897	0,0070639	4
Cbx3	3,78E-06	0,3421318	0,0290823	4
Cd74	3,93E-06	0,2600467	0,0301999	4
Ncl	4,62E-06	0,3497589	0,0355218	4
Snrpg	5,04E-06	0,3364192	0,0387422	4
Plp2	1,04E-05	0,3237461	0,0798119	4
Atpif1	1,95E-05	0,25408	0,1503251	4
Ldha	9,42E-05	0,2986766	0,7249773	4
1810037I17Rik	0,000509	0,2889512	1	4
Npm1	0,0015293	0,2583716	1	4

Mif	0,0023476	0,2742538	1	4
Аср5	0	3,319558	0	5
Ctsk	0	3,2098538	0	5
Mmp9	0	2,9319411	0	5
Atp6v0d2	0	1,6317394	0	5
Atp6v1g1	1,03E-32	0,714602	7,90E-29	5
Atp6v1b2	3,61E-32	0,8484075	2,78E-28	5
S100a4	2,88E-24	0,3580755	2,22E-20	5
Rplp0	2,24E-21	0,3789065	1,72E-17	5
Atp6v0e	1,59E-19	0,5791218	1,22E-15	5
Clec12a	2,15E-19	0,6797228	1,65E-15	5
Atp5b	5,04E-19	0,5895514	3,88E-15	5
Atp6ap2	4,55E-18	0,6521125	3,50E-14	5
Txn1	5,73E-18	0,5953859	4,41E-14	5
Aldoa	2,06E-16	0,5445913	1,59E-12	5
Vim	7,63E-16	0,3266097	5,87E-12	5
Cstb	3,91E-14	0,4908419	3,01E-10	5
Mdh2	4,74E-13	0,5192962	3,64E-09	5
Atp5g3	2,82E-12	0,548405	2,17E-08	5
Sh3bgrl3	3,88E-12	0,2901452	2,98E-08	5
Mrpl52	4,78E-12	0,4990309	3,67E-08	5
Atp6v0b	1,01E-11	0,4278917	7,75E-08	5
Uqcr10	2,98E-11	0,4624327	2,29E-07	5
Rps8	4,25E-11	0,2593157	3,27E-07	5
Rps19	1,35E-10	0,2506816	1,04E-06	5
Ndufb5	1,62E-10	0,4361181	1,25E-06	5
Slc25a3	1,73E-10	0,3565163	1,33E-06	5
Uqcrfs1	1,81E-10	0,4944496	1,40E-06	5
Cox5a	3,70E-10	0,3842793	2,85E-06	5
Rps13	3,78E-10	0,2747031	2,91E-06	5
Atp5c1	6,70E-10	0,4545524	5,16E-06	5
Rps16	1,14E-09	0,2777837	8,74E-06	5
Cox6b1	1,18E-09	0,3151552	9,10E-06	5
Mdh1	2,11E-09	0,4637367	1,62E-05	5
Ccl9	2,52E-09	0,3447143	1,94E-05	5
Slc25a4	2,27E-08	0,3759794	0,0001746	5
Cycs	1,09E-07	0,4182443	0,0008364	5
Atp5a1	1,37E-07	0,4350791	0,0010554	5
Ndufab1	1,49E-07	0,3768366	0,0011467	5
Gpr137b	2,55E-07	0,3731087	0,0019642	5
Atp5o	2,65E-07	0,3711643	0,0020417	5
Rps7	3,84E-07	0,270865	0,002953	5
Ndufv2	4,61E-07	0,3838279	0,0035454	5

Arf1	5,91E-07	0,3578269	0,0045439	5
Rpl36al	6,23E-07	0,346795	0,0047959	5
Slc25a5	8,31E-07	0,3103557	0,0063954	5
Npm1	9,10E-07	0,3250698	0,0070003	5
Rpl10a	1,29E-06	0,2620756	0,0099586	5
Ndufb8	2,06E-06	0,3234848	0,0158748	5
Uqcrb	5,78E-06	0,285285	0,0444756	5
Ndufc2	7,14E-06	0,3436336	0,0549421	5
Cox6c	8,31E-06	0,2535836	0,0639383	5
Slc39a1	1,65E-05	0,3069946	0,1269292	5
Atpif1	1,83E-05	0,3071665	0,1410906	5
Uqcrc1	1,89E-05	0,3785272	0,1454475	5
Atp6v1f	2,06E-05	0,3204882	0,1583911	5
Actr3	3,77E-05	0,2794907	0,2898158	5
Polr1d	5,16E-05	0,3399788	0,3968503	5
Atp5g2	7,06E-05	0,2973603	0,5430191	5
Sec11c	7,19E-05	0,2802466	0,5531323	5
Vdac2	8,09E-05	0,3020719	0,6224995	5
Ndufs7	0,0001196	0,3316647	0,9203837	5
Nop10	0,0002573	0,288013	1	5
Atp5f1	0,0003718	0,2761075	1	5
Ndufa1	0,0008182	0,313692	1	5
Cox7b	0,0008272	0,2930384	1	5
Usmg5	0,0016196	0,2652113	1	5
Clec4a2	0,003731	0,2547257	1	5