

Cell, Volume 184

Supplemental information

**Secreted gelsolin inhibits DNGR-1-dependent
cross-presentation and cancer immunity**

Evangelos Giampazolias, Oliver Schulz, Kok Haw Jonathan Lim, Neil C. Rogers, Probir Chakravarty, Naren Srinivasan, Oliver Gordon, Ana Cardoso, Michael D. Buck, Enzo Z. Poirier, Johnathan Canton, Santiago Zelenay, Stefano Sammiceli, Natalia Moncaut, Sunita Varsani-Brown, Ian Rosewell, and Caetano Reis e Sousa

Table S1. Distribution of clinical parameters (age, sex and tumour stage) between *sGSN*^{Low} and *sGSN*^{High} groups in human tumours, related to Figure 6

TCGA dataset										
LIHC										
AGE (years old)	Group	10_19	20_29	30_39	40_49	50_59	60_69	70_79	80_89	
Chi-Square test	<i>sGSN</i> High	1	4	7	9	17	21	12	2	
p value = 0.79 ns	<i>sGSN</i> Low	0	3	3	10	18	27	12	1	
SEX	Group	Female	Male							
Chi-Square test	<i>sGSN</i> High	28	46							
p value = 0.38 ns	<i>sGSN</i> Low	22	52							
STAGE	Group	0	1	2	3	4				
Chi-Square test	<i>sGSN</i> High	6	28	19	20	1				
p value = 0.30 ns	<i>sGSN</i> Low	1	34	22	16	1				
HNSC										
AGE (years old)	Group	10_19	20_29	30_39	40_49	50_59	60_69	70_79	80_89	
Chi-Square test	<i>sGSN</i> High	1	0	2	14	30	39	9	9	
p value = 0.75 ns	<i>sGSN</i> Low	0	0	1	13	33	39	13	5	
SEX	Group	Female	Male							
Chi-Square test	<i>sGSN</i> High	33	71							
p value = 0.15 ns	<i>sGSN</i> Low	23	81							
STAGE	Group	0	1	2	3	4				
Chi-Square test	<i>sGSN</i> High	1	4	17	20	62				
p value = 0.27 ns	<i>sGSN</i> Low	6	2	12	20	64				
STAD										
AGE (years old)	Group	30_39	40_49	50_59	60_69	70_79	80_89			
Chi-Square test	<i>sGSN</i> High	1	4	12	12	8	4			
p value = 0.49 ns	<i>sGSN</i> Low	0	5	8	10	15	3			
SEX	Group	Female	Male							
Chi-Square test	<i>sGSN</i> High	15	26							
p value = 0.82 ns	<i>sGSN</i> Low	17	24							
STAGE	Group	0	1	2	3	4				
Chi-Square test	<i>sGSN</i> High	1	4	15	15	6				
p value = 0.22 ns	<i>sGSN</i> Low	1	7	9	22	2				

Table S2. List of human genes encoding F-actin binding proteins, related to Figure 7

F-actin binding proteins	Human gene symbol	Full human gene name
1	<i>ACTR2</i>	Actin-related protein 2
2	<i>ACTR3</i>	Actin-related protein 3
3	<i>ACTN1</i>	Alpha-Actinin
4	<i>ANLN</i>	Anillin
5	<i>CAPZA1</i>	Capping actin protein of muscle Z-line subunit alpha 1
6	<i>CAPZA2</i>	Capping actin protein of muscle Z-line subunit alpha 2
7	<i>CAPZB</i>	Capping actin protein of muscle Z-line subunit beta
8	<i>CARMIL1</i>	Capping protein regulator and myosin 1 linker 1
9	<i>CDC42</i>	Cell division control protein 42 homolog
10	<i>CFL1</i>	Cofilin 1
11	<i>CFL2</i>	Cofilin 2
12	<i>EZR</i>	Ezrin
13	<i>FSCN1</i>	Fascin
14	<i>FLNA</i>	Filamin A
15	<i>FLNB</i>	Filamin B
16	<i>FMN1</i>	Formin-1
17	<i>FMN2</i>	Formin-2
18	<i>GSN</i>	Gelsolin
19	<i>CCDC88A</i>	Girdin
20	<i>CAPG</i>	Macrophage-capping protein
21	<i>MSN</i>	Moesin
22	<i>MYH1</i>	Myosin heavy chain 1
23	<i>MYH10</i>	Myosin heavy chain 10
24	<i>MYH11</i>	Myosin heavy chain 11
25	<i>MYH13</i>	Myosin heavy chain 13
26	<i>MYH14</i>	Myosin heavy chain 14
27	<i>MYH15</i>	Myosin heavy chain 15
28	<i>MYH16</i>	Myosin heavy chain 16
29	<i>MYH2</i>	Myosin heavy chain 2
30	<i>MYH3</i>	Myosin heavy chain 3
31	<i>MYH4</i>	Myosin heavy chain 4
32	<i>MYH6</i>	Myosin heavy chain 6
33	<i>MYH7</i>	Myosin heavy chain 7
34	<i>MYH8</i>	Myosin heavy chain 8
35	<i>MYH9</i>	Myosin heavy chain 9
36	<i>MYO3A</i>	Myosin IIIA
37	<i>MYO3B</i>	Myosin IIIB
38	<i>MYO9A</i>	Myosin IXA
39	<i>MYO9B</i>	Myosin IXB
40	<i>MYL5</i>	Myosin light chain 5
41	<i>MYL1</i>	Myosin light chain 1
42	<i>MYL2</i>	Myosin light chain 2
43	<i>MYL3</i>	Myosin light chain 3
44	<i>MYL4</i>	Myosin light chain 4
45	<i>MYL6</i>	Myosin light chain 6
46	<i>MYL6B</i>	Myosin light chain 6B
47	<i>MYL7</i>	Myosin light chain 7
48	<i>MYL9</i>	Myosin light chain 9
49	<i>MYLK2</i>	Myosin light chain kinase 2, skeletal/cardiac muscle
50	<i>MYLK</i>	Myosin light chain kinase, smooth muscle
51	<i>MYLIP</i>	Myosin regulatory light chain interacting protein
52	<i>MYO5A</i>	Myosin VA
53	<i>MYO5B</i>	Myosin VB
54	<i>MYO5C</i>	Myosin VC
55	<i>MYO6</i>	Myosin VI
56	<i>MYO7A</i>	Myosin VIIA
57	<i>MYO7B</i>	Myosin VIIB
58	<i>MYO10</i>	Myosin X
59	<i>MYO15A</i>	Myosin XVA
60	<i>MYO18A</i>	Myosin XVIII A
61	<i>MYO18B</i>	Myosin XVIII B
62	<i>MYO1A</i>	Myosin-IA
63	<i>MYO1B</i>	Myosin-IB
64	<i>MYO1C</i>	Myosin-IC
65	<i>MYO1D</i>	Myosin-ID
66	<i>MYO1E</i>	Myosin-IE
67	<i>MYO1F</i>	Myosin-IF
68	<i>MYO1G</i>	Myosin-IG
69	<i>MYO1H</i>	Myosin-IH
70	<i>MYLL1</i>	Myosin, light chain, cardiac muscle-Like 1
71	<i>DIAPH1</i>	Protein diaphanous homolog 1
72	<i>RDX</i>	Radixin
73	<i>SCIN</i>	Scinderin
74	<i>SPTA1</i>	Spectrin alpha, erythrocytic 1
75	<i>SPTAN1</i>	Spectrin alpha, nonerythrocytic 1
76	<i>SPTB</i>	Spectrin beta, erythrocytic
77	<i>SPTBN1</i>	Spectrin beta, nonerythrocytic 1
78	<i>SPTBN2</i>	Spectrin beta, nonerythrocytic 2
79	<i>SPTBN4</i>	Spectrin beta, nonerythrocytic 4
80	<i>SPIRE1</i>	Spire type actin nucleation factor 1
81	<i>SPIRE2</i>	Spire type actin nucleation factor 2
82	<i>TMOD1</i>	Tropomodulin-1
83	<i>TMOD2</i>	Tropomodulin-2
84	<i>TMOD3</i>	Tropomodulin-3
85	<i>TPM1</i>	Tropomyosin alpha-1 chain
86	<i>TPM3</i>	Tropomyosin alpha-3 Chain
87	<i>TPM4</i>	Tropomyosin alpha-4 chain
88	<i>TPM2</i>	Tropomyosin beta chain
89	<i>VASP</i>	Vasodilator-stimulated phosphoprotein
90	<i>VIL1</i>	Villin1

Table S3. List of human genes encoding microtubule binding proteins, related to Figure 7

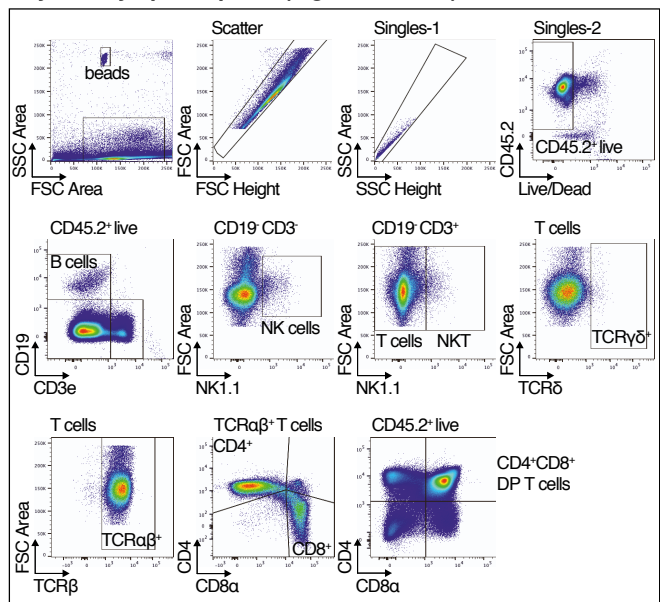
Microtubule binding proteins	Human gene symbol	Full human gene name
1	<i>ASPM</i>	Abnormal spindle-like microcephaly-associated protein
2	<i>CEP55</i>	Centrosomal protein of 55 kDa
3	<i>CKAP5</i>	Cytoskeleton-associated protein
4	<i>CLIP1</i>	CAP-Gly domain containing linker protein 1
5	<i>CLIP2</i>	CAP-Gly domain containing linker protein 2
6	<i>DCTN1</i>	Dynactin subunit 1
7	<i>DCTN2</i>	Dynactin subunit 2
8	<i>DLGAP5</i>	Disks large-associated protein 5
9	<i>DNAH1</i>	Dynein axonemal heavy chain 1
10	<i>DNAH10</i>	Dynein axonemal heavy chain 10
11	<i>DNAH11</i>	Dynein axonemal heavy chain 11
12	<i>DNAH12</i>	Dynein axonemal heavy chain 12
13	<i>DNAH14</i>	Dynein axonemal heavy chain 14
14	<i>DNAH17</i>	Dynein axonemal heavy chain 17
15	<i>DNAH2</i>	Dynein axonemal heavy chain 2
16	<i>DNAH3</i>	Dynein axonemal heavy chain 3
17	<i>DNAH5</i>	Dynein axonemal heavy chain 5
18	<i>DNAH6</i>	Dynein axonemal heavy chain 6
19	<i>DNAH7</i>	Dynein axonemal heavy chain 7
20	<i>DNAH8</i>	Dynein axonemal heavy chain 8
21	<i>DNAH9</i>	Dynein axonemal heavy chain 9
22	<i>DNAI1</i>	Dyneins intermediate chain 1
23	<i>DNAI2</i>	Dyneins intermediate chain 2
24	<i>DNAL1</i>	Dynein light intermediate chains 2
25	<i>DNAL4</i>	Dynein light intermediate chains 4
26	<i>DNALI1</i>	Dynein light intermediate chains 1
27	<i>DYNC1H1</i>	Dynein cytoplasmic 1 heavy chain 1
28	<i>DYNC1LI1</i>	Dynein cytoplasmic 1 light intermediate chain 1
29	<i>DYNC1LI2</i>	Dynein cytoplasmic 1 light intermediate chain 2
30	<i>DYNC2LI1</i>	Dynein cytoplasmic 2 light intermediate chain 1
31	<i>DYNLL1</i>	Dynein light chain 1, cytoplasmic
32	<i>DYNLL2</i>	Dynein light chain 2, cytoplasmic
33	<i>DYNLRB1</i>	Dynein light chain roadblock-type 1
34	<i>DYNLRB2</i>	Dynein light chain roadblock-type 2
35	<i>DYNLT1</i>	Dynein light chain Tctex-type 1
36	<i>DYNLT3</i>	Dynein light chain Tctex-type 3
37	<i>KATNA1</i>	Katanin p60 ATPase-containing subunit A1
38	<i>KATNB1</i>	Katanin p60 ATPase-containing subunit B1
39	<i>KIF11</i>	Kinesin family member 11
40	<i>KIF12</i>	Kinesin family member 12
41	<i>KIF13A</i>	Kinesin family member 13A
42	<i>KIF13B</i>	Kinesin family member 13B
43	<i>KIF14</i>	Kinesin family member 14
44	<i>KIF15</i>	Kinesin family member 15
45	<i>KIF16B</i>	Kinesin family member 16B
46	<i>KIF17</i>	Kinesin family member 17
47	<i>KIF18A</i>	Kinesin family member 18A
48	<i>KIF19</i>	Kinesin family member 19
49	<i>KIF1A</i>	Kinesin family member 1A
50	<i>KIF1B</i>	Kinesin family member 1B
51	<i>KIF1C</i>	Kinesin family member 1C
52	<i>KIF20A</i>	Kinesin family member 20A
53	<i>KIF20B</i>	Kinesin family member 20B
54	<i>KIF21A</i>	Kinesin family member 21A
55	<i>KIF21B</i>	Kinesin family member 21B
56	<i>KIF22</i>	Kinesin family member 22
57	<i>KIF23</i>	Kinesin family member 23
58	<i>KIF24</i>	Kinesin family member 24
59	<i>KIF25</i>	Kinesin family member 25
60	<i>KIF26A</i>	Kinesin family member 26A
61	<i>KIF26B</i>	Kinesin family member 26B
62	<i>KIF27</i>	Kinesin family member 27
63	<i>KIF2A</i>	Kinesin family member 2A
64	<i>KIF2C</i>	Kinesin family member 2C
65	<i>KIF3A</i>	Kinesin family member 3A
66	<i>KIF3B</i>	Kinesin family member 3B
67	<i>KIF3C</i>	Kinesin family member 3C
68	<i>KIF4A</i>	Kinesin family member 4A
69	<i>KIF4B</i>	Kinesin family member 4B
70	<i>KIF5A</i>	Kinesin family member 5A
71	<i>KIF5B</i>	Kinesin family member 5B
72	<i>KIF5C</i>	Kinesin family member 5C
73	<i>KIF6</i>	Kinesin family member 6
74	<i>KIF7</i>	Kinesin family member 7
75	<i>KIF9</i>	Kinesin family member 9
76	<i>KIFAP3</i>	Kinesin-2 associated protein
77	<i>KIFC1</i>	Kinesin family member C1
78	<i>KIFC2</i>	Kinesin family member C2
79	<i>KIFC3</i>	Kinesin family member C3
80	<i>KLC1</i>	Kinesin light chain 1
81	<i>KLC2</i>	Kinesin light chain 2
82	<i>KLC3</i>	Kinesin light chain 3
83	<i>KLC4</i>	Kinesin light chain 4
84	<i>MAP1A</i>	Microtubule-associated protein 1A
85	<i>MAP1B</i>	Microtubule-associated protein 1B
86	<i>MAP2</i>	Microtubule-associated protein 2
87	<i>MAP4</i>	Microtubule-associated protein 4
88	<i>MAP6</i>	Microtubule-associated protein 6
89	<i>MAP7</i>	Microtubule-associated protein 7
90	<i>MAP9</i>	Microtubule-associated protein 9
91	<i>MAPRE1</i>	Microtubule-associated protein RP/EB family member 1
92	<i>MAPRE2</i>	Microtubule-associated protein RP/EB family member 2
93	<i>MAPRE3</i>	Microtubule-associated protein RP/EB family member 3
94	<i>MAPT</i>	Microtubule associated protein tau
95	<i>PAFAH1B1</i>	Platelet-activating factor acetylhydrolase IB subunit alpha
96	<i>PLEC</i>	Plectin
97	<i>TUBG1</i>	Tubulin gamma 1

Table S4. List of primers for RT-qPCR, related to STAR Methods, Key Resources Table, Oligonucleotides

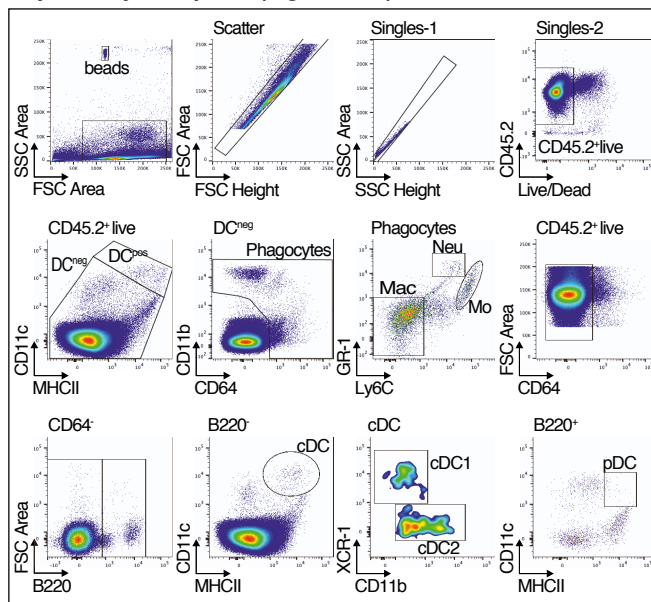
Mouse Primers	Name	Sequence
RT-qPCR	<i>Ccl24</i> Fwd	CCAAGAAGGGCCATAAGATCTG
	<i>Ccl24</i> Rev	GCCCCTTTAGAAGGCTGGTT
	<i>Ccl3</i> Fwd	ACTGCCCTTGCTGTTCTTCT
	<i>Ccl3</i> Rev	CTGCCGGTTTCTCTTAGTCA
	<i>Retnla</i> Fwd	GACTGCTACTGGGTGTGCTT
	<i>Retnla</i> Rev	GCTGGGTTCTCCACCTCTC
	<i>Chil4</i> Fwd	AAGGCTGCTACTCACTCCAC
	<i>Chil4</i> Rev	TCCAGCACTAACAGTAGGGTCA
	<i>Arg1</i> Fwd	GGAATCTGCATGGGCAACCTGTGT
	<i>Arg1</i> Rev	AGGGTCTACGTCTCGCAAGCCA
	<i>IL-33</i> Fwd	TGAGACTCCGTTCTGGCCTC
	<i>IL-33</i> Rev	CTTTCATGCTTGGTACCCGAT
	<i>Col1a2</i> Fwd	GCAGGTTACCTACTCTGTCCT
	<i>Col1a2</i> Rev	CTTGCCCCATTCATTTGTCT
	<i>Col3a1</i> Fwd	CTGGAGAACCTGGTGCAAAT
	<i>Col3a1</i> Rev	CCTCGGAAGCCACTAGGAC
	<i>Acta2</i> Fwd	ACTGGGACGACATGGAAAAG
	<i>Acta2</i> Rev	G TTCAGTGGTGCCTCTGTCA
	<i>Areg2</i> Fwd	GGTCTTAGGCTCAGGCCATTA
<i>Areg2</i> Rev	CGCTTATGGTGGAACCTCTC	
<i>Nippo_Actin</i> Fwd	ACGACGTGGCAGCTCTCGTTGTGG	
<i>Nippo_Actin</i> Rev	GGTGCTTCGGTCAGCAGCACGGG	
<i>18S RNA</i> Fwd	CGCCGCTAGAGGTGAAATTCT	
<i>18S RNA</i> Rev	CGAACCTCCGACTTTCGTTCT	

Data S1. Gating strategy items, related to STAR Methods, Method details, Analysis of tumour tissue, tdLNs and lymphoid organs

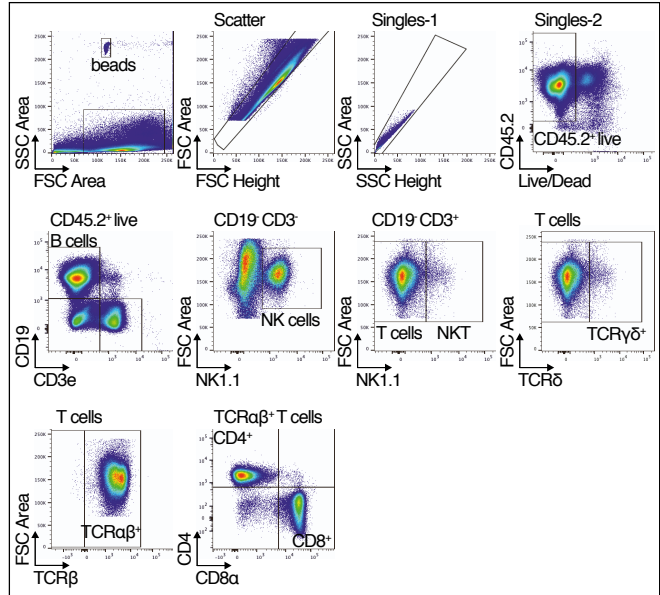
Thymus-Lymphoid panel (Figures S1B, D)



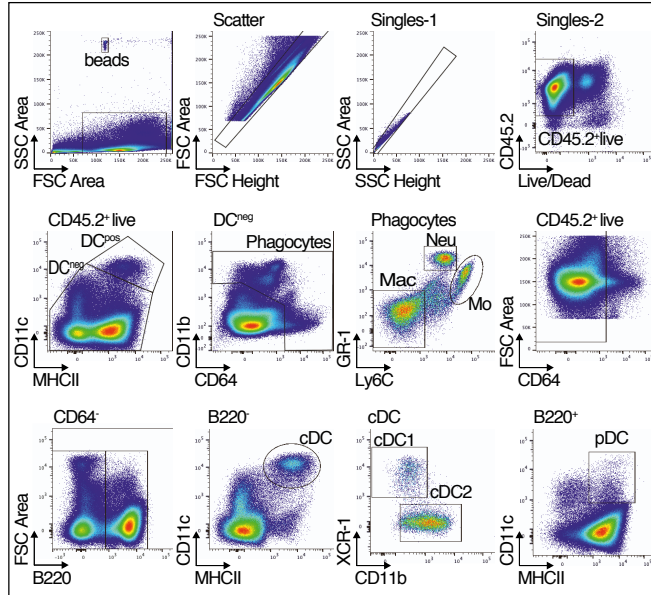
Thymus-Myeloid panel (Figure S1G)



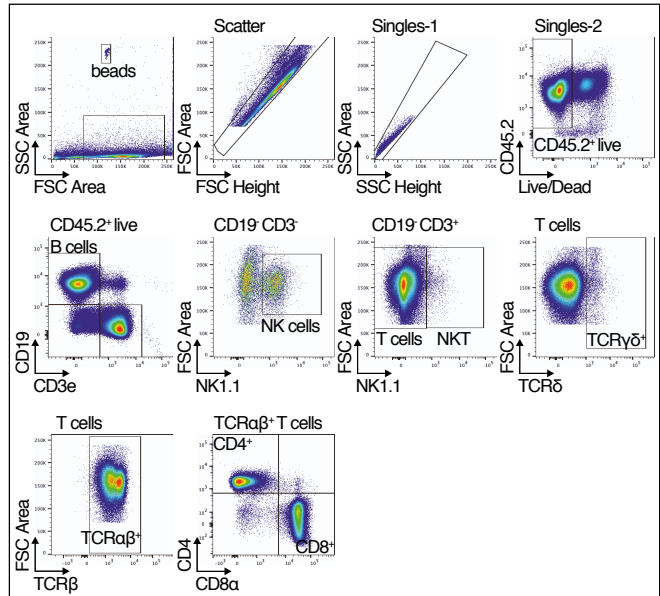
Spleen-Lymphoid panel (Figures S1B, E)



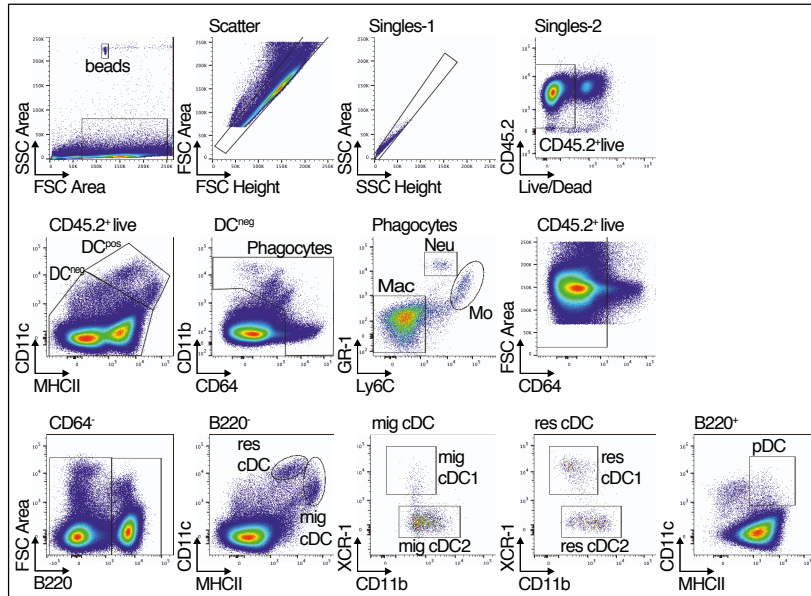
Spleen-Myeloid panel (Figure S1H)



iLN-Lymphoid panel (Figures S1B, F)

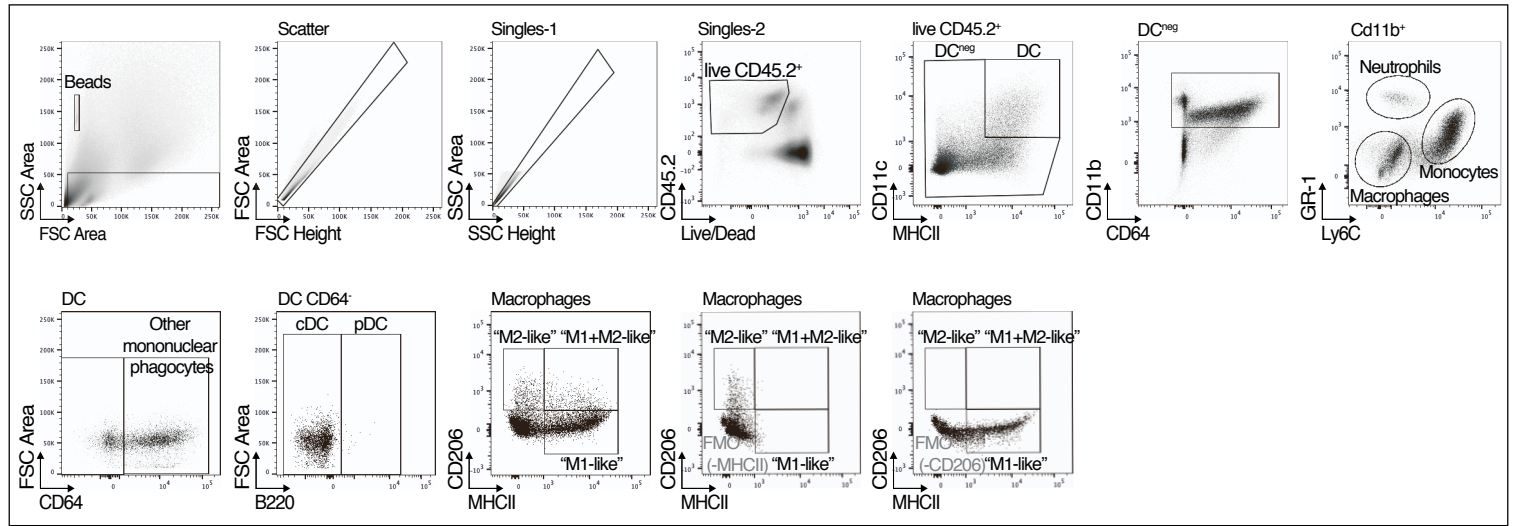


iLN-Myeloid panel (Figure S1I)

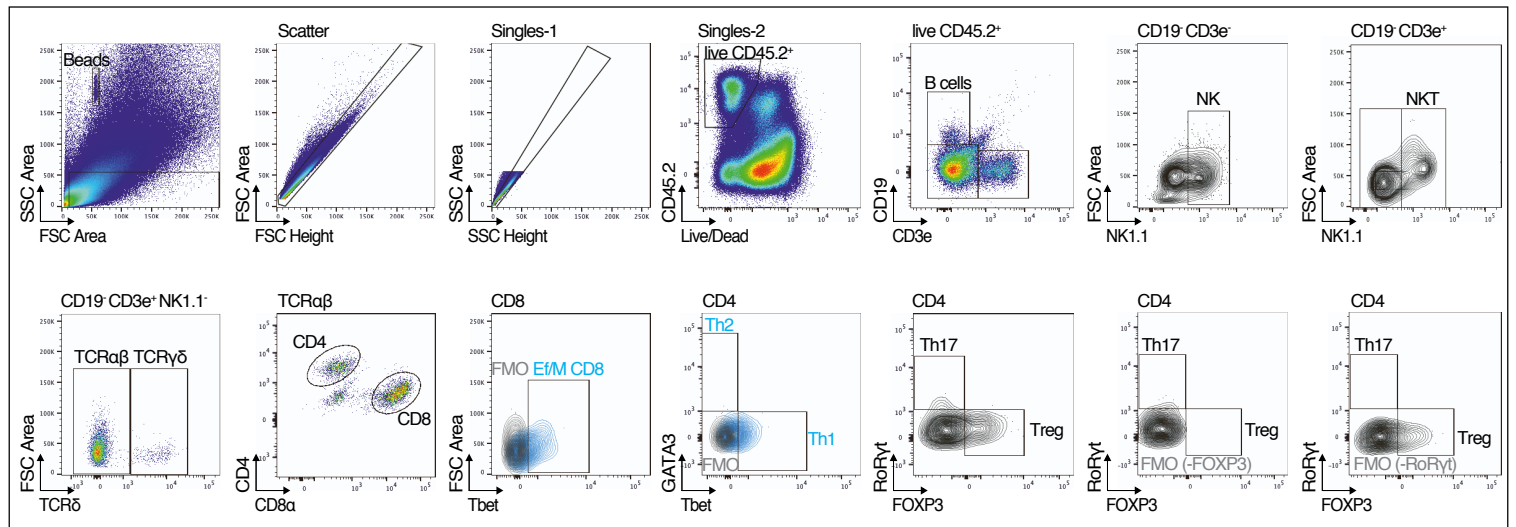


Data S2. Gating strategy items, related to Figure 4

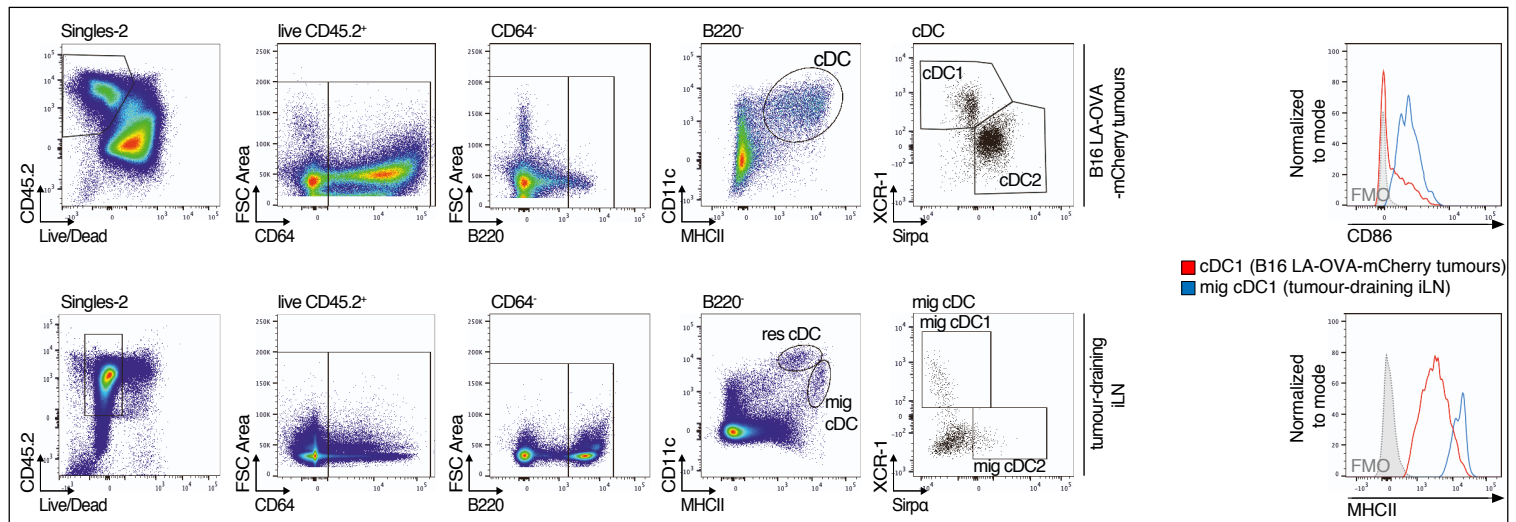
B16 LA-OVA-mCherry tumours-Myeloid panel (Figures 4A, C)



B16 LA-OVA-mCherry tumours-Lymphoid panel (Figures 4B, E)

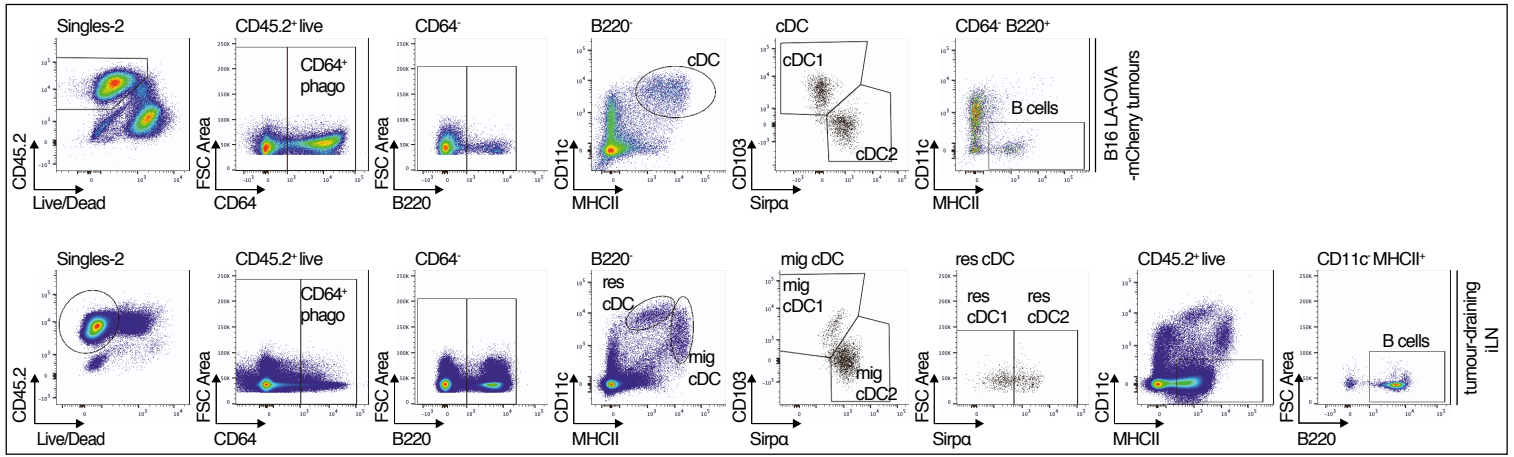


B16 LA-OVA-mCherry tumours + tdLN-DC panel (Figures 4D and 5B)

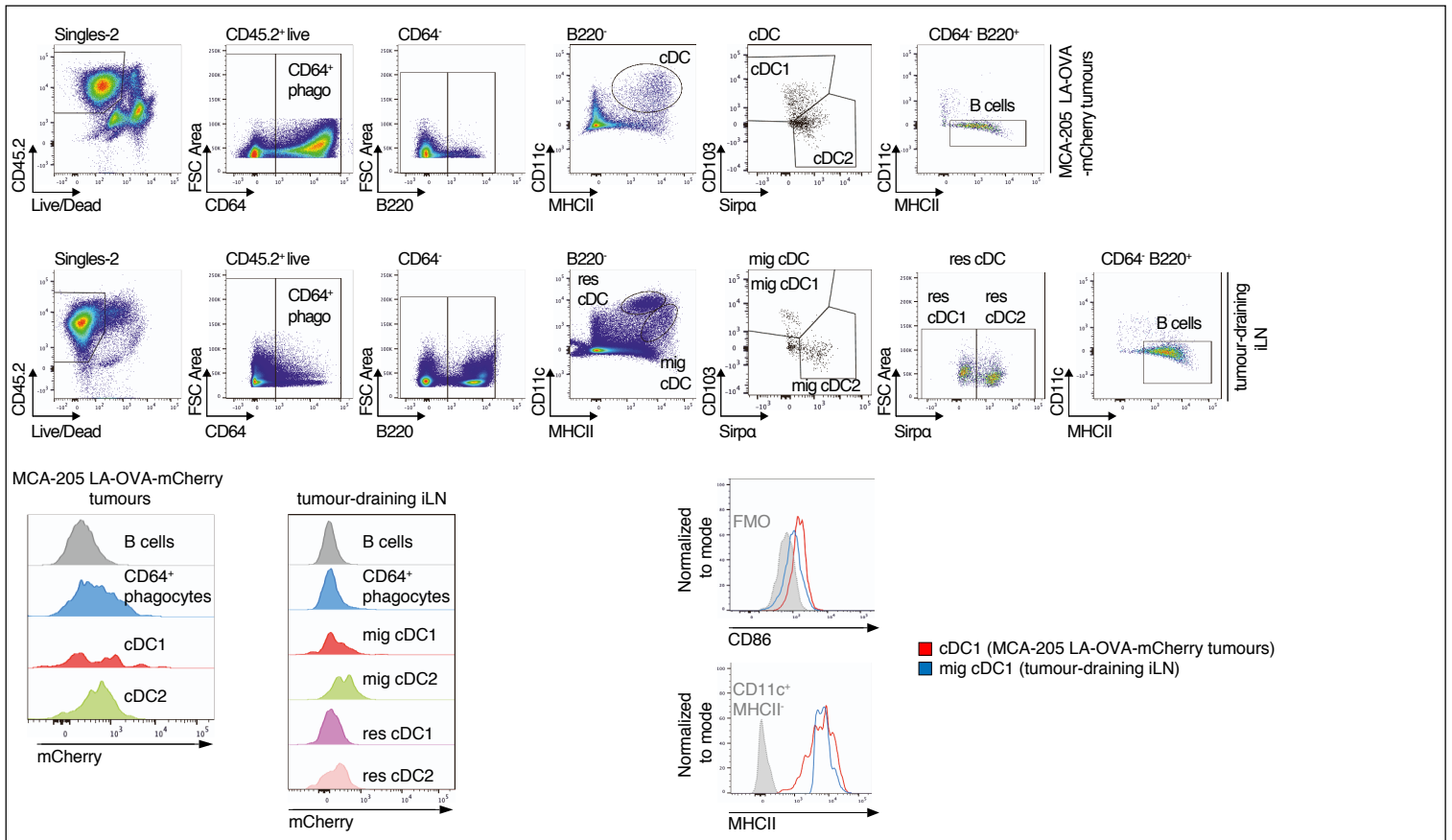


Data S3. Gating strategy items, related to Figure 5 and Supplemental Figure 4

B16 LA-OVA-mCherry tumours-DC panel (Figures 5A and S4C)



MCA-205 LA-OVA-mCherry tumours-DC panel (Figures S4D, G and H)



tumour draining axillary and inguinal LN (of B16 LA-OVA-mCherry tumours)-DC panel-FACS sorting (Figures 5C and S4I, J)

