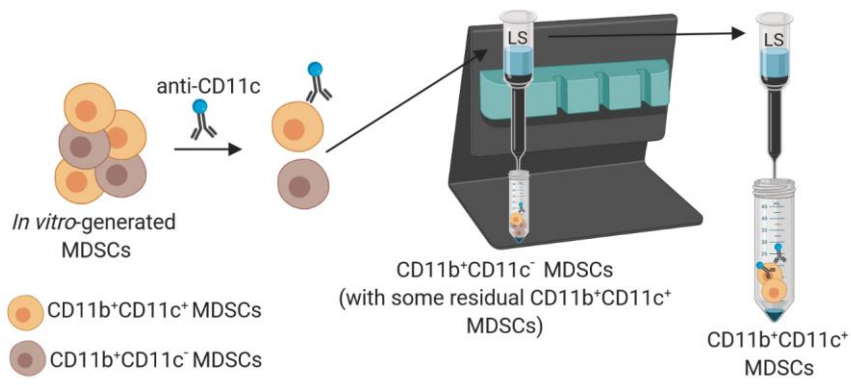
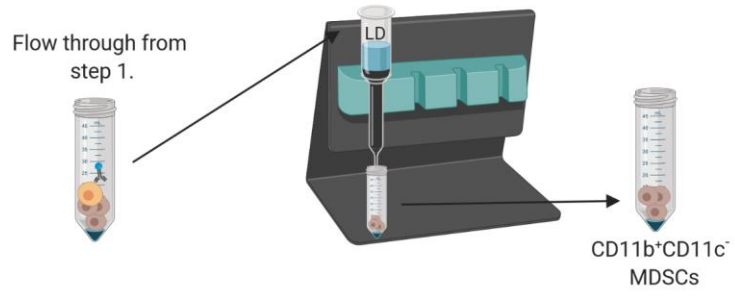
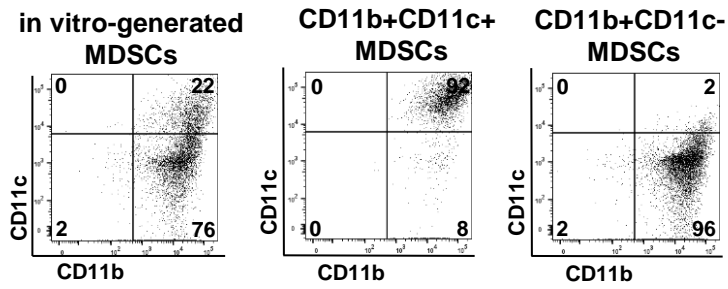


A

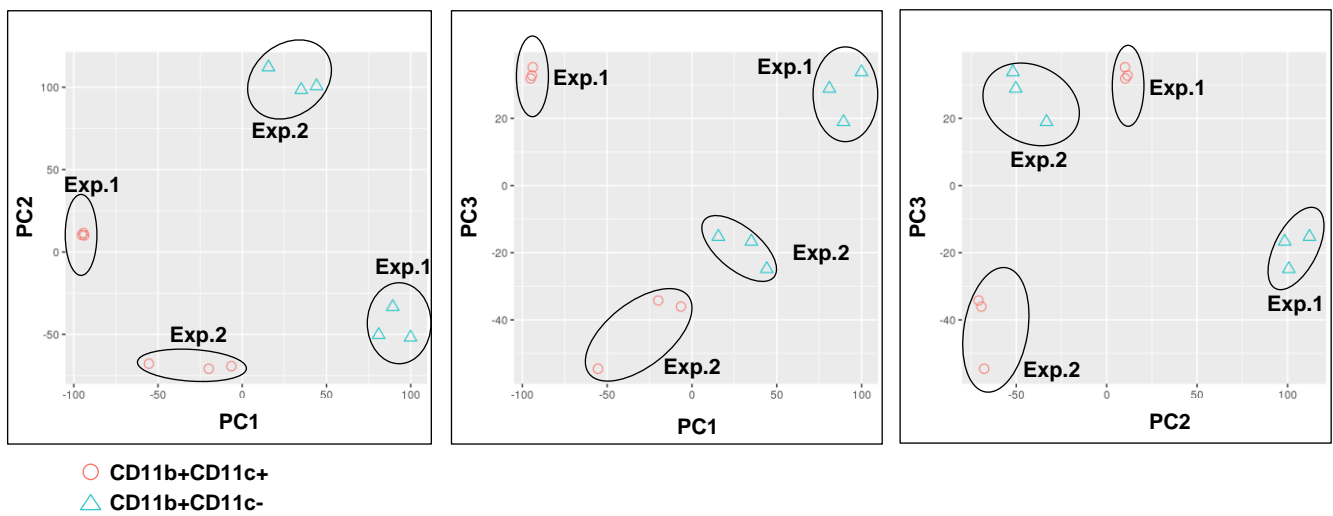
1. Isolation of CD11b⁺CD11c⁺ MDSCs



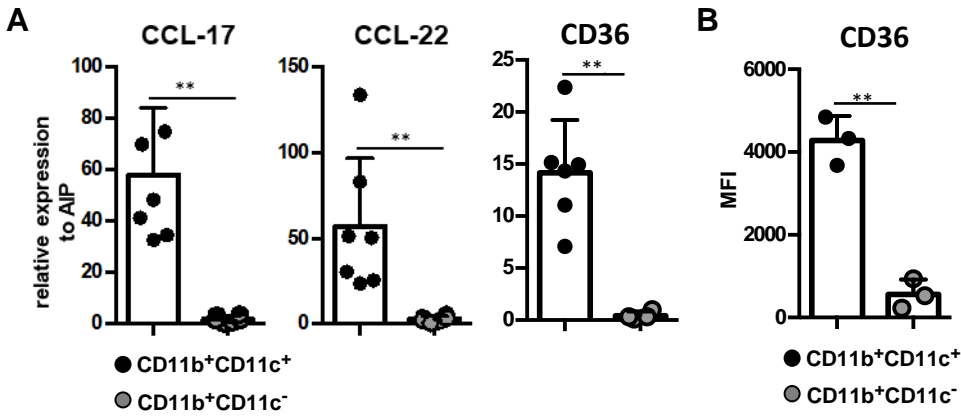
2. Isolation of CD11b⁺CD11c⁻ MDSCs

**B**

Suppl. Figure 1: Isolation of CD11b⁺CD11c⁺ and CD11b⁺CD11c⁻ MDSCs. (A) MDSC subpopulations were isolated from *in vitro*-generated MDSCs by MACS technology. CD11b⁺CD11c⁺ MDSCs were isolated by anti-CD11c MicroBeads and performing a positive selection with LS columns. CD11b⁺CD11c⁻ MDSCs were isolated from the flow through of the CD11b⁺CD11c⁺ isolation. To deplete remaining CD11b⁺CD11c⁺ cells from the flow through, flow through was loaded on depleting LD columns. (B) Data show a representative flow cytometry graph indicating purity of isolated CD11b⁺CD11c⁺ and CD11b⁺CD11c⁻ MDSC subpopulations isolated from *in vitro*-generated MDSCs. (A) Figure created with Biorender.com. (B) FACS diagrams of one representative experiment are shown.



Suppl. Figure 2: Principal component analysis (PCA) recapitulates strong differences in the transcriptome between CD11b+CD11c+ and CD11b+CD11c- MDSCs. CD11b+CD11c+ and CD11b+CD11c- MDSCs were isolated from in vitro-generated MDSCs after 4 days in culture. Principal component analysis was performed with three samples/ group from two independent performed experiments. Each dot/triangle represents one array sample. In both experiments PCA analysis clearly separated two clusters corresponding to the CD11b+CD11c+ and CD11b+CD11c- MDSCs.



Suppl. Figure 3: CD11b⁺CD11c⁺ MDSCs express higher levels of CCL17, CCL22 and CD36 compared to CD11b⁺CD11c⁻ MDSCs. (A) CD11b⁺CD11c⁺ and CD11b⁺CD11c⁻ MDSC subpopulations were isolated from in vitro-generated MDSCs after 4 days in culture. mRNA expression of CCL-17, CCL-22 and CD36 was analysed by qRT-PCR and relative expression was calculated. (B) CD36 surface expression was analyzed by flow cytometry and mean fluorescence intensity (MFI) of CD36 was calculated. (A) Data represent the mean value \pm SD of 4-7 samples/group. (B) Data represent the mean value \pm SD of 3 samples/group. (A-B) Mann-Whitney test. ** \leq p0.01.

Suppl. Tab. S1: Mice

| Mouse strain | Short form | Genotype | Sex | Age | Supplier |
|---|----------------------------|---------------------------------|------------|---------------|--|
| B6-C-H2-K^{bm1}/ByJ | B6.bm1 | H-2K ^{bm1} , CD45.2 | Female | 9-20 weeks | Bred at University of Ulm; originally obtained from Jackson Laboratory |
| B6.SJL- Ptprc^aPep3^b/BoyJ | B6.SJL | H-2 ^b ; CD45.1 | Female | 6-9 weeks | Bred at University of Ulm; originally obtained from Jackson Laboratory |
| B6.129(C)-Stat6^{tm1Gru}/J | STAT6^{-/-} | H-2 ^b | Female | 6-9 weeks | Bred at University of Ulm; originally obtained from Jackson Laboratory |
| B7-H1 deficient mice [1] | PD-L1^{-/-} | H-2 ^b | Female | 6-9 weeks | Bone marrow cells provided by R. Schirmbeck; Internal Medicine I, University Medical Center Ulm |
| C57BL/6 | B6 | H-2 ^b ; CD45.2 | Female | 6-9 weeks | Janvier |
| DBA/2 | | H-2 ^d ; CD45.2 | Female | 6-9 weeks | Janvier |

[1] Dong H, Zhu G, Tamada K, Flies DB, van Deursen JMA, Chen L (2004) B7-H1 Determines Accumulation and Deletion of Intrahepatic CD8⁺ T Lymphocytes. *Immunity* 20:327–336

Suppl. Tab. S2. Antibodies for flow cytometry

| target protein | supplier | clone | fluorochrom | category | RRID |
|-----------------------|-------------------------|--------------|------------------------|--------------------------|------------------------|
| CD11b | ThermoFisher Scientific | M1/70 | APC Alexa Fluor 700 | 56-0112-80 17-0112-81 | AB_657586 AB_469342 |
| CD11c | ThermoFisher Scientific | N418 | PE Pe-Cyanine 7 | 12-0114-81 25-0114-81 | AB_465551 AB_469589 |
| CD36 | BioLegend | HM36 | PE | 102605 | AB_389348 |
| CD3ε | ThermoFisher Scientific | 145-2C11 | Pe-Cyanine 7 | 25-0031-81 | AB_469571 |
| CD4 | ThermoFisher Scientific | GK1.5 | APC-eFluor 780 | 47-0041-80 | AB_11219883 |
| CD40 | ThermoFisher Scientific | 1C10 | APC | 17-0401-81 | AB_469385 |
| CD45.1 | BD Biosciences | A20 | V450 | 560520 | AB_1727490 |
| CD80 | ThermoFisher Scientific | 6-10A1 | PE | 12-0801-81 | AB_465751 |
| CD86 | ThermoFisher Scientific | GL1 | FITC | 11-0862-81 | AB_465147 |
| CD8a | ThermoFisher Scientific | 53-6.7 | APC | 17-0081-81 | AB_469334 |
| F4/80 | ThermoFisher Scientific | BM8 | eFluor 450 | 48-4801-80 | AB_1548756 |
| Gr-1 | ThermoFisher Scientific | RB6-8C5 | eFluor 450 | 48-5931-80 | AB_1548797 |
| I-Ab | BD Biosciences | AF6-120.1 | FITC | 553551 | AB_394918 |
| Ly-6C | ThermoFisher Scientific | HK1.4 | APC-eFluor 780 | 47-5932-80 | AB_2573991 |
| Ly-6G | BD Biosciences | 1A8 | V450 | 560603 | AB_1727564 |
| PD-L1 | ThermoFisher Scientific | MIH5 | PE | 12-5982-81 | AB_466088 |
| PD-L2 | ThermoFisher Scientific | 122 | FITC | 11-9972-81 | AB_465461 |

Suppl. Tab. S3. Primer for qRT-PCR

| target | sequence (5'→3') |
|--|---------------------------------|
| AIP forward | GCTCCGTTATAGATGACAGC |
| AIP reverse | ATCTCGATGTGGAAGATGAG |
| arginase 1 forward | TCCTTTCAAATTGTGAAGAACCCACGGTC |
| arginase 1 reverse | AGAATCCTGGTACATCTGGGAACCTTTCCT |
| CCL17 forward | ATCCCTGGAACACTCCACTG |
| CCL17 reverse | TGCTTCTGGGGACTTTTCTG |
| CCL22 forward | TCCTCCTCCCTAGGACAGTTT |
| CCL22 reverse | TCTGGACCTCAAAATCCTGC |
| CD36 forward | TCGGAACTGTGGGCTCATTGC |
| CD36 reverse | GCCACGTCATCTGGGTTTTGC |
| HO-1 forward | TCAAGGCCTCAGACAAATCC |
| HO-1 reverse | ACAACCAGTGAGTGGAGCCT |
| IDO forward | GGATGCCTGACTTTGTGGAC |
| IDO reverse | TTCTTTGCCAGCCTCGTGT |
| IFN-γ forward | TGCAGAGCCAGATTATCTCTTTCTACCTCAG |
| IFN-γ reverse | GGTTGTTGACCTCAAACCTGGCAATACTC |
| IL-10 forward | CACTGCTATGCTGCCTGCTCTTACTGAC |
| IL-10 reverse | TGGCAACCCAAGTAACCCTTAAAGTCCT |
| IL-13 forward | CACACTCCATACCATGCTGC |
| IL-13 reverse | TGTGTCTCTCCCTCTGACCC |
| IL-4 forward | GGTGTCTTCGTTGCTGTGA |
| IL-4 reverse | TCTCGAATGTACCAGGAGCC |
| IL-5 forward | CCCACGGACAGTTTGATTCT |
| IL-5 reverse | GCAATGAGACGATGAGGCTT |
| iNOS forward | AGCAATGGGCAGACTCTGAAGAAATCTC |
| iNOS reverse | ATGTTTGCTTCGGACATCAAAGGTCTCAC |
| TGF-β forward | TCTACCAGAAATATAGCAACAATTCCT |
| TGF-β reverse | CTGAATCGAAAGCCCTGTATTCCGTCTC |
| TNFα forward | CCAGACCCTCACACTCAGATCA TCTTCTC |
| TNFα reverse | CTAGTTGGTTGTCTTTGAGATCCATGCCGT |

Suppl. Tab. S4: GO terms of biological processes and linked target genes up-regulated in CD11b+CD11c+ MDSCs compared to CD11b+CD11c- MDSCs

| 1.) cell movement and migration | | |
|---|--------------|--|
| biological process | GO ID | linked target genes |
| cell motility | 0048870 | Nfatc2, Cxcl3, Lamc1, Emp2, Eng, Fscn1, Jup, rab13, Mmp14, 1600029D21Rik, Nrp2, Nrp1, Axl, Mmp12, Slamf8, Cxcl16, Pdpn, Ccl17, Ccl22, Plekho1, Itgb7, Ext1, Ch25h, Rhoc, Acvr1, Cd2ap, Nav1, Acvr11, Plekhg5, Tns1, Sema6d, Tubb2a, Nrg1, Gpr183, Cxcl2, Ctnn, Ccl9, Flrt3, Gpr35, Vav2, C230081A13Rik, Cx3cl1, Tesk1, Megf8, Ccl7, Pmp22, Ccr7, Lgals3, Mertk, Ptpro, Amical, Mcoln2, Insl6, Palld, Pld2, Met, Sdc3, Pf4, Sdc4 |
| cell migration | 0016477 | Nfatc2, Cxcl3, Emp2, Lamc1, Eng, Fscn1, Jup, Mmp14, Rab13, 1600029D21Rik, Nrp2, Nrp1, Axl, Mmp12, Slamf8, Cxcl16, Pdpn, Ccl2, Ccl17, Ccl22, Plekho1, Itgb7, Ext1, Rhoc, Acvr1, Cd2ap, Nav1, Plekhg5, Acvr11, Tns1, Sema6d, Tubb2a, Nrg1, Gpr183, Cxcl2, Ccl9, Flrt3, Gpr35, Vav2, Cx3cl1, C230081A13Rik, Tesk1, Megf8, Ccl7, Pmp22, Ccr7, Lgals3, Ccr5, Mertk, Ptpro, Fyn, Amical, Mcoln2, Palld, Met, Pf4, Sdc3, Sdc4 |
| locomotion | 0040011 | Nfatc2, Cxcl3, Lamc1, Emp2, Eng, Fscn1, Jup, Rab13, Mmp14, 1600029D21Rik, Nrp2, Nrp1, Mmp12, Axl, Slamf8, Cxcl16, Pdpn, Ccl2, Ccl17, Ccl22, Plekho1, Itgb7, Ext1, Pdgfa, Ch25h, Rhoc, Acvr1, Cd2ap, Nav1, Acvr11, Plekhg5, Tns1, Sema6d, Tubb2a, Nrg1, Gpr183, Cxcl2, Ctnn, Ccl9, Flrt3, Gpr35, Vav2, C230081A13Rik, Cx3cl1, Megf8, Tesk1, Ccl7, Cysltr1, Pmp22, Ccr7, Lgals3, Ccr5, Mertk, Ptpro, Fyn, Amical, Mcoln2, Insl6, Palld, Pld2, Met, Cmtm3, Pf4, Sdc3, Sdc4 |
| lymphocyte migration | 0072676 | Ccr7, Ccl2, Ccl17, Ch25h, Ccl9, Ccl22, Cx3cl1, Gpr183, Itgb7, Cxcl16, Ext1, Ccl7 |
| movement of cell or subcellular component | 0006928 | Nfatc2, Cxcl3, Emp2, Lamc1, Eng, Fscn1, Jup, Mmp14, Rab13, 1600029D21Rik, Nrp2, Nrp1, Mmp12, Uchl1, Axl, Slamf8, Cxcl16, Pdpn, Ccl2, Ccl17, Ccl22, Plekho1, Itgb7, Ext1, Ch25h, Rhoc, Acvr1, Cd2ap, Nav1, Acvr11, Plekhg5, Dst, Ift43, Tns1, Sema6d, Tubb2a, Nrg1, Gpr183, Nr4a3, Cxcl2, Ctnn, Ccl9, Flrt3, Gpr35, Plxna1, Vav2, C230081A13Rik, Evi, Cx3cl1, Megf8, Tesk1, Ccl7, Pmp22, Ccr7, Lgals3, Ccr5, Mertk, Ptpro, Fyn, Amical, Mcoln2, Insl6, Dpysl2, Palld, Pld2, Met, Pf4, Rasgrp1, Sdc3, Sdc4 |
| lymphocyte chemotaxis | 0048247 | Ccr7, Ccl2, Ccl17, Ch25h, Ccl22, Cx3cl1, Cxcl16, Ccl7 |
| chemotaxis | 0006935 | Sema6d, Cxcl3, Nrg1, Gpr183, Eng, Cxcl2, Ccl9, Gpr35, Rab13, Nrp2, Cx3cl1, Slamf8, Cxcl16, Ccl7, Cysltr1, Ccl2, Ccr7, Ccl17, Lgals3, Ccr5, Ccl22, Ptpro, Pdgfa, Amical, Ch25h, Plekhg5, Cmtm3, Pf4 |
| taxis | 0042330 | Sema6d, Cxcl3, Nrg1, Gpr183, Eng, Cxcl2, Ccl9, Gpr35, Nrp2, Cx3cl1, Slamf8, Cxcl16, Ccl7, Cysltr1, Ccl2, Ccr7, |

| | | |
|---|--------------|---|
| | | Ccl17, Ccr5, Lgals3, Ccl22, Ptpro, Pdgfa, Amical, Ch25h, Plekhg5, Cmtm3, Pf4 |
| cell chemotaxis | 0060326 | Ccr7, Ccl2, Ccr5, Lgals3, Ccl17, Cxcl3, Ccl22, Gpr183, Ptpro, Eng, Cxcl2, Amical, Ch25h, Ccl9, Gpr35, Rab13, Cx3cl1, Slamf8, Cxcl16, Plekhg5, Ccl7, Pf4 |
| monocyte chemotaxis | 0002548 | Ccl2, Lgals3, Ccl17, Ccl22, Ccl9, Cx3cl1, Ptpro, Ccl7 |
| leukocyte chemotaxis | 0030595 | Ccl2, Ccr7, Ccl17, Ch25h, Ccl22, Cxcl3, Cx3cl1, Ptpro, Slamf8, Cxcl16, Ccl7, Pf4 |
| leukocyte migration | 0050900 | Ccr7, Ccl2, Lgals3, Ccl17, Cxcl3, Ccl22, Gpr183, Ptpro, Itgb7, Ext1, Cxcl2, Amical, Ch25h, Ccl9, Mcoln2, Gpr35, Cx3cl1, Slamf8, Cxcl16, Ccl7, Pf4 |
| mononuclear cell migration | 0071674 | Ccl2, Ccl17, Lgals3, Amical, Ccl9, Ccl22, Cx3cl1, Ptpro, Ccl7 |
| myeloid leukocyte migration | 0097529 | Ccl2, Ccr7, Ccl17, Ccl22, Cxcl3, Mcoln2, Cx3cl1, Ptpro, Ccl7, Pf4 |
| 2.) cell adhesion | | |
| biological process | GO ID | linked target genes |
| biological adhesion | 0022610 | Bcl2, Emp2, Lamc1, Tgfbi, Gbp3, Itga1, Eng, Jup, Stab1, Flrt3, Plxnb2, Adam23, C230081A13Rik, Cx3cl1, Nrp1, Axl, Igsf9, Mllt4, Tjp2, Serpinb8, Pdpn, Gpnmb, Cd6, Pmp22, Itgax, Lgals1, Mpzl3, Cdh1, Itgae, Mertk, Inpp1, Itgb7, Ext1, Cd200r1, Gbp2, Fblim1, Cd36, Amical, Acvr1, Cd2ap, Palld, Dst, Parvb, Sdc3, Mfge8 |
| cell adhesion | 0007155 | Bcl2, Emp2, Lamc1, Tgfbi, Itga1, Eng, Jup, Stab1, Plxnb2, Flrt3, Adam23, Cx3cl1, C230081A13Rik, Nrp1, Axl, Igsf9, Mllt4, Tjp2, Serpinb8, Pdpn, Cd6, Gpnmb, Pmp22, Itgax, Lgals1, Mpzl3, Cdh1, Itgae, Mertk, Inpp1, Itgb7, Ext1, Cd200r1, Fblim1, Cd36, Amical, Acvr1, Cd2ap, Palld, Dst, Parvb, Sdc3, Mfge8 |
| positive regulation of cell-cell adhesion | 0022409 | Ccl2, Pcd11g2, Ccr7, Il7r, H2-Ab1, H2-Aa, Aif1, Nr4a3, Cd74, Cd86, Cd83, Il2ra, Cx3cl1, Pdpn, Rasgrp1, Cd6 |
| positive regulation of cell adhesion | 0045785 | Ccr7, Ccl2, Pcd11g2, Il7r, H2-Ab1, H2-Aa, Aif1, Emp2, Nr4a3, Cd74, Cd86, Cd36, Cd83, Il2ra, Cx3cl1, Pdpn, Cd6, Sdc4 |
| regulation of leukocyte cell-cell adhesion | 1903037 | Ccl2, Ccr7, Pcd11g2, Il7r, H2-Ab1, Aif1, H2-Aa, Nr4a3, Cd74, Cd86, Cd83, Il2ra, Rasgrp1, Cd6, Sdc4 |
| regulation of cell-cell adhesion | 0022407 | Aif1, Il1a, Trpv4, Nr4a3, Cd74, Myo10, Cd86, Zfp703, Cd83, Cx3cl1, Cd244, H2-M3, H2-DMA, Mllt4, Pdpn, Kifap3, Gpnmb, Cd6, Shb, Il6st, Pcd11g2, Ccr7, Ccl2, Lgals3, Ccr5, Klf4, Lgals1, Il7r, Cdh1, H2-Ab1, H2-Aa, Malt1, Hfe, Ass1, Tnfsf9, Il2ra, Cd1d1, Rasgrp1, Sdc4 |
| 3.) leukocyte activation and immune response | | |
| biological process | GO ID | linked target genes |
| immune response | 0006955 | Cxcl3, Emp2, Il1a, Rnase6, Cd74, Cd86, Slamf7, Axl, Traf3ip2, H2-DMA, Cd6, H2-DMb1, Serpinb9, Tnfrsf11a, Ccl2, Ccl17, Ccl22, Ext1, Tnfsf12, Mfhas1, Tnfsf8, Cd36, |

| | | |
|---|---------|--|
| | | Cd1d1, Gpr183, Trem2, Cxcl2, Lta, Ptx3, Ccl9, Cx3cl1, Cd244, Irg1, Ccl7, Ctss, Pmp22, Cysltr1, Ccr7, Pcd11g2, Prdx1, Ccr5, Lgals3, Tmem106a, H2-Ab1, beta 1, H2-Aa, C1qc, Wfdc17, C1qb, H2-Eb1, Fyn, Mcoln2, Ly86, Il2ra, Rasgrp1, Pf4, Lat2 |
| lymphocyte migration | 0072676 | Ccr7, Ccl2, Ccl17, Ch25h, Ccl9, Ccl22, Cx3cl1, Gpr183, Itgb7, Cxcl16, Ext1, Ccl7 |
| positive regulation of immune system process | 0002684 | Bcl2, Nfatc2, Aif1, Gbp5, Il1a, Cd74, Cd86, Cd83, Mmp14, Pgf, Axl, Mmp12, Dcstamp, Car2, H2-DMA, Cd6, Shb, Ccl2, Cd40, Mfhas1, Cd36, Rftn1, Cacnb3, Cd1d1, Tnip3, Scimp, Stk39, Blnk, Gpr183, Trem2, Trpv4, Nr4a3, Lta, Lgmn, Cx3cl1, Cd244, Irg1, Gpr68, Pcd11g2, Il6st, Ccr7, Lgals3, Il7r, H2-Ab1, C1qc, H2-Aa, Pyhin1, C1qb, Fyn, Il2ra, Pld2, Cmtm3, BC096441, Nlrc5, Kenn4, Pf4, Rasgrp1, Lat2, Zbtb46 |
| lymphocyte chemotaxis | 0048247 | Ccr7, Ccl2, Ccl17, Ch25h, Ccl22, Cx3cl1, Cxcl16, Ccl7 |
| monocyte chemotaxis | 0002548 | Ccl2, Lgals3, Ccl17, Ccl22, Ccl9, Cx3cl1, Ptpro, Ccl7 |
| leukocyte chemotaxis | 0030595 | Ccl2, Ccr7, Ccl17, Ch25h, Ccl22, Cxcl3, Cx3cl1, Ptpro, Slamf8, Cxcl16, Ccl7, Pf4 |
| positive regulation of lymphocyte activation | 0051251 | Bcl2, Nfatc2, Aif1, Gpr183, Il1a, Cd74, Cd86, Cd83, Mmp14, Axl, Cd244, H2-M3, H2-DMA, Cd6, Shb, Ccl2, Il6st, Ccr7, Pcd11g2, Lgals1, Il7r, H2-Ab1, H2-Aa, Malt1, Cd40, Tlr9, Tnfsf9, Il2ra, Cd1d1, BC096441, Rasgrp1 |
| positive regulation of leukocyte activation | 0002696 | Bcl2, Nfatc2, Aif1, Gpr183, Il1a, Trem2, Nr4a3, Cd74, CD86, Mmp14, Cd83, Axl, Cd244, H2-M3, H2-DMA, Cd6, Shb, Ccl2, Pcd11g2, Ccr7, Il6st, Lgals1, Il7r, H2-Ab1, H2-Aa, Malt1, Cd40, Tlr9, Tnfsf9, Il2ra, Cd1d1, Pld2, BC096441, Rasgrp1 |
| leukocyte migration | 0050900 | Ccr7, Ccl2, Lgals3, Ccl17, Cxcl3, Ccl22, Gpr183, Ptpro, Itgb7, Ext1, Cxcl2, Amical, Ch25h, Ccl9, Mcoln2, Gpr35, Cx3cl1, Slamf8, Cxcl16, Ccl7, Pf4 |
| defense response | 0006952 | Cxcl3, Gbp5, Spire1, Il1a, Rnase6, Cd74, Cd86, Slamf7, Axl, Slamf8, Traf3ip2, Cd6, Serpinb9, Itgax, Ccl2, Ccl17, Ccl22, Cd40, Ext1, Gbp2, Mfhas1, Tnfsf8, Cd36, Acvr1, Cd1d1, Gbp3, Cst3, Trem2, Cxcl2, Lta, Ptx3, Ccl9, Cx3cl1, Cd244, Irg1, Ccl7, Cysltr1, Ccr7, Adra2a, Lgals3, Ccr5, Prdx1, Il7r, Tmem106a, C1qc, Ciita, Wfdc17, C1qb, Batf2, Fyn, Mcoln2, Ly86, Il2ra, Pf4, Rasgrp1 |
| antigen processing and presentation of exogenous peptide antigen via MHC class II | 0019886 | Cd74, H2-Ab1, H2-Aa, H2-DMA, H2-DMb2, Ctss, H2-Eb1, H2-DMb1, Ifi30 |
| antigen processing and presentation of peptide antigen via MHC class II | 0002495 | Cd74, H2-Ab1, H2-Aa, H2-DMA, H2-DMb2, Ifi30, H2-DMb1, H2-Eb1, Ctss |

| | | |
|---|--------------|--|
| antigen processing and presentation of peptide or polysaccharide antigen via MHC class II | 0002504 | Cd74, H2-Ab1, H2-Aa, H2-DMA, H2-DMb2, Ctss, H2-Eb1, H2-DMb1, Ifi30 |
| positive regulation of leukocyte cell-cell adhesion | 1903039 | Ccl2, Pdc11g2, Ccr7, Il7r, H2-Ab1, Aif1, H2-Aa, Nr4a3, Cd74, Cd86, Cd83, Il2ra, Rasgrp1, Cd6 |
| negative regulation of immune system process | 0002683 | Pdc11g2, Il7r, Susd4, H2-Ab1, C1qc, H2-Aa, Mfhas1, H2-Ob, Cd74, Cd86, Il2ra, Cx3cl1, Klr1b, Axl, Mmp12, Slamf8, Pf4, Gpnmb, Sdc4, Zbtb46, Serpinb9 |
| positive regulation of T cell activation | 0050870 | Ccl2, Pdc11g2, Ccr7, Il7r, H2-Ab1, Aif1, H2-Aa, Cd74, Cd86, Cd83, Il2ra, Cd6, Rasgrp1 |
| mononuclear cell migration | 0071674 | Ccl2, Ccl17, Lgals3, Amical, Ccl9, Ccl22, Cx3cl1, Ptpro, Ccl7 |
| adaptive immune response | 0002250 | Tnfrsf11a, Pdc11g2, Cd74, Fyn, Cd86, Mcoln2, H2-Ab1, H2-Aa, Emp2, Slamf7, H2-Eb1, Serpinb9 |
| humoral immune response | 0006959 | Ccl2, Lgals3, Ccl17, Cxcl3, Ccl22, H2-Ab1, C1qc, Gpr183, Wfdc17, C1qb, Rnase6, Cxcl2, Lta, Traf3ip2, Pf4 |
| regulation of leukocyte cell-cell adhesion | 1903037 | Ccl2, Ccr7, Pdc11g2, Il7r, H2-Ab1, Aif1, H2-Aa, Nr4a3, Cd74, Cd86, Cd83, Il2ra, Rasgrp1, Cd6, Sdc4 |
| positive regulation of leukocyte differentiation | 1902107 | Ccr7, Il7r, H2-Aa, Malt1, Trem2, Il1a, Cd74, Tnfsf9, Cd83, Mmp14, Il2ra, Axl, Cd1d1, Dcstamp, H2-M3, Car2, H2-DMA, Rasgrp1, Pf4, Gpr68, Zbtb46, Shb |
| myeloid leukocyte migration | 0097529 | Ccl2, Ccr7, Ccl17, Ccl22, Cxcl3, Mcoln2, Cx3cl1, Ptpro, Ccl7, Pf4 |
| inflammatory response | 0006954 | Cxcl3, Gbp5, Trem2, Il1a, Cd180, Cxcl2, Lta, Ccl9, Stab1, Cx3cl1, Axl, Irg1, Traf3ip2, Ccl7, Cd6, Cysl1r1, Serpinb9, Ccr7, Ccl2, Adra2a, Ccr5, Ccl17, Ccl22, Ciita, Cd40, Ext1, Mfhas1, Tlr9, Ly86, Il2ra, Acvr1, Pld3, Pld4, Rasgrp1, Pf4 |
| regulation of leukocyte differentiation | 1902105 | Ccr7, Cd74, Il7r, Cd83, H2-Aa, C1qc, Il2ra, Dcstamp, Slamf8, Rasgrp1, Pf4, Zbtb46 |
| antigen processing and presentation of exogenous peptide antigen | 0002478 | Cd74, H2-Ab1, H2-Aa, H2-DMA, H2-DMb2, Ctss, H2-DMb1, H2-Eb1, Ifi30 |
| myeloid leukocyte migration | 0097529 | Ccl2, Ccr7, Ccl17, Ccl22, Cxcl3, Mcoln2, Cx3cl1, Ptpro, Ccl7, Pf4 |
| 4.) ERK1 and ERK2 cascade | | |
| biological process | GO ID | linked target genes |
| regulation of ERK1 and ERK2 cascade | 0070372 | Ccl2, Tnfrsf11a, Ccl17, Ccl22, Pdgfa, Trpv4, Mfhas1, Cd74, Cd36, Tnfaip8l3, Cx3cl1, Ramp3, Scimp, Ccl7, Rasgrp1, Gpnmb |
| positive regulation of ERK1 and ERK2 cascade | 0070374 | Ccl2, Tnfrsf11a, Ccl17, Ccl22, Pdgfa, Trpv4, Mfhas1, Cd74, Cd36, Tnfaip8l3, Cx3cl1, Ramp3, Scimp, Ccl7, Rasgrp1, Gpnmb |

| 5.) response to cytokine | | |
|--------------------------------------|--------------|---|
| biological process | GO ID | linked target genes |
| chemokine-mediated signaling pathway | 0070098 | Cxcl2, Ccl2, Stk39, Ccl17, Ccl9, Ccl22, Cxcl3, Gpr35, Ccl7, Pf4 |
| response to interferon-gamma | 0034341 | Ccl2, Ccl17, Mrc1, Ccl22, H2-Ab1, H2-Aa, Cd40, Ciita, Gbp5, Gbp3, Gbp2, Kynu, H2-Eb1, Cd74, Ccl9, Evl, Cx3cl1, Cxcl16, Irg1, Ccl7 |
| 6.) response to stress | | |
| biological process | GO ID | linked target genes |
| response to tumor necrosis factor | 0034612 | Tnfrsf11a, Ccl2, Ccl17, Ccl22, Cx3cl1, Cd40, Dcstamp, Cxcl16, Ccl7 |

Suppl. Tab. S5: GO terms of biological processes and linked target genes down-regulated in CD11b+CD11c+ MDSCs compared to CD11b+CD11c- MDSCs

| Immune and defense response | | |
|--|--------------|---|
| biological process | GO ID | linked target genes |
| defense response | 0006952 | Fcgb, Ngp, Gal, Lbp, Cd177, Itgb2l, Camp, Pglyrp1, Elane, S100a8, S100a9, Mpo, Serpinb1a, Cd55, Ear6, Ltf, Chi3l3, Ctsg, Lcn2, Plac8 |
| defense response to fungus | 0050832 | Mpo, Ltf, Ctsg, Camp, Elane |
| defense response to bacterium | 0042742 | Mpo, Lbp, Ltf, Ctsg, Camp, Pglyrp1, Elane, Lcn2, Plac8 |
| antifungal humoral response | 0019732 | Ltf, Camp |
| response to bacterium | 0009617 | Mpo, Slfn4, Lbp, Ltf, Ctsg, Camp, Pglyrp1, Elane, Lcn2, Lrg1, Plac8 |
| response to fungus | 0009620 | Mpo, Ltf, Ctsg, Camp, Elane |
| disruption of cells of other organism | 0044364 | Ltf, Ctsg, Pglyrp, Camp, Elane, Trem3 |
| killing of cells of other organism | 0031640 | Ltf, Ctsg, Pglyrp1, Camp, Elane, Trem3, |
| regulation of inflammatory response | 0050727 | Ets1, Pparg, Lbp, Nt5e, Cst7, Il17ra, Mefv, Il16, Fpr2, Cd55, Calcr1, C3, Pde2a, Alox5, Aldh2, Abcd2, Pglyrp1, S100a8, Bcr, S100a9, Il1r2, Tgm2, Ffar2, Cd47, Siglece, Ptges, Ager, Siglecg |
| organ or tissue specific immune response | 0002251 | Ifnlr1, Ffar2, Ear6, Ltf, Camp |
| mucosal immune response | 0002385 | Ifnlr1, Ffar2, Ear6, Ltf, Camp |
| innate immune response in mucosa | 0002227 | Ear6, Ltf, Camp |
| regulation of defense response | 0031347 | Ifnlr1, Ets1, Lbp, Pparg, Cst7, Nt5e, Nod1, Mefv, Il17ra, Cd37, Il16, Fpr2, Il27, Mmp2, Cd55, Ltf, Calcr1, Ceacam1, Irf7, C3, Pde2a, Fcgb, Alox5, Aldh2, Abcd2, Pglyrp1, S100a8, Trem3, S100a9, Bcr, Il1r2, Tgm2, Flot1, Ffar2, Gfi1, Serpinb1a, Tspan32, Cd47, Ptges, Siglece, Ager, Siglecg |
| humoral immune response | 0006959 | Fcgb, CD55, Ltf Ctsg, Pglyrp1, Camp, S100a9 |