MiR-21-dependent macrophage-to-fibroblast signaling determines the cardiac response to pressure overload

Deepak Ramanujam, PhD[1,2,*], Anna Patricia Schön[1,2,*], Christina Beck, MPharm[1,2], Paula Vaccarello, MSc[1], Giulia Felician, PhD[1,2], Anne Dueck, PhD[1,2], Dena Esfandyari, MSc[1,2], Gunter Meister, PhD[3], Thomas Meitinger, MD[2,4,5], Christian Schulz, MD[2,6] and Stefan Engelhardt, MD, PhD[1,2]

Correspondence should be addressed to Stefan Engelhardt, Institut für Pharmakologie und Toxikologie, Technische Universität München (TUM), Biedersteiner Straße 29, 80802 München. Phone: +49 89 4140 3260. Email: stefan.engelhardt@tum.de

- SUPPLEMENTAL MATERIAL -

Expanded Methods

Isolation of primary cells from adult mouse hearts: Hearts were harvested from 8-10 weeks old C57BL/6N mice and digested with Collagenase II (Worthington, Lakewood, NJ) as described previously [10]. The enzymatically dissociated cells were then separated into cardiomyocyte- (pellet) and non-myocyte-enriched fractions (supernatant) by centrifugation (900 rpm for 1 min).

Flow cytometry/cell sorting: We combined magnetic- and fluorescence-activated cell sorting to isolate non-myocyte cell suspension into different cell fractions. The non-myocyte-enriched supernatant was centrifuged at 400 g for 5 minutes and the non-myocyte cell pellet was then treated with rat anti-mouse CD16/CD32 at 4°C for 20 minutes before being incubated with Biotin-conjugated anti-CD45-primary antibodies at 4°C for 30 minutes. After washing, the cells were incubated with Streptavidin-coupled magnetic beads for 15 min at 4ºC. The leukocyte fraction was then separated from other cell fractions using a MACS column (Miltenyi Biotec, Bergish Gladbach, Germany). Isolated leukocytes and cells from the flow-through were then triturated through a 40 µm Nylon cell strainer (Falcon) and subjected to FACS analysis (using a Biorad S3 cell sorter). For this, the following primary fluorescent antibodies for were used: flow-through: anti-PDGFRA-PECy7, anti-CD105-PE; leukocyte fraction: anti-CD45-Alexa Fluor 488, anti-CD11b-PE, anti-CD64-PE 594 and anti-F4/80-PeCy7.

For isolation of adult cardiac fibroblasts for co-culture experiments, the non-myocyte fraction was enriched for cardiac fibroblasts, using a MACS-based approach with a biotin-conjugated anti-PDGFRA primary antibody, followed by flow cytometry-based cell sorting with anti-PDGFRA-PECy7, anti-CD105-PE and anti-CD45-AlexaFluor 488 antibodies.

For isolation of peripheral blood cells, blood was obtained from the WT and cKO mice directly after sacrifice. After erythrocyte lysis the remaining cells were centrifuged at 400g for 7 min at 4°C and blood lymphocytes and blood monocytes were sorted via FACS based on their specific FSC area/SSC area pattern.
Hematological analyses of mouse blood samples were carried out using an automated cytometer (ADVIA, Siemens).

BrdU incorporation assay in vivo: To assess local proliferation of cardiac macrophages in vivo, wildtype and miR-21 cKO mice were subjected to TAC and three days later 5'-bromo-2'-deoxyuridine (BrdU) at a dose of 100 mg/kg was intraperitoneally administrated 2 h before sacrifice. Myocardial sections (5 µm) were fixed with methanol (at -20°C for 10 min), washed thoroughly with tap water and treated with acetone (at -20°C for 1 min). The sections were dried and then treated with 1N HCl at 37°C for 20 min (to expose the incorporated BrdU) and 0.1M borate buffer at RT for 30 min. The sections were then blocked with 5% goat serum diluted in PBS and stained with primary antibodies against MRC1, BrdU and CD68 at 4°C overnight. The sections were then stained with the respective secondary antibodies. Images were acquired by confocal microscopy using 63X glycerol objective (Leica SP5), and analyzed using the Metamorph software (n > 2000 cells per heart).

Histochemical and immunohistochemical analyses: For the analysis of collagen deposition, paraffin sections (8 µm) of left ventricular myocardium were stained with Sirius red and Fast green [51]. Whole heart images were taken with a 10x objective using a AxioObserver.Z1 (Zeiss, Jena, Germany) motorized scanning-stage microscopy (130 x 85; Märzhäuser, Wetzlar, Germany). Fibrosis was quantified as the ratio of signals from Sirius red to Fast green in each section. The cross-sectional area of cardiomyocytes was assessed by staining 6 µm-thick myocardial paraffin sections with Alexa Fluor 647-labeled wheat-germ agglutinin

(WGA; Life Technologies). SYTOX Green (Life Technologies) was applied to detect nuclei (at 488 nm). Images were taken from areas of transversely cut muscle fibers at 20x magnification (Leica TCS SP5 II; laser lines, 488nm for SYTOX Green and 633nm for WGA). Metamorph software (Molecular Devices) was applied for automated cell detection and to determine the average cross-sectional area of cardiomyocytes in one section (n > 50 cells per section; 100-200 cells per heart) [52].

Quantitative real-time PCR: Total RNA was prepared with peqGOLD RNA pure and 1 µg was reverse transcribed with Protoscript reverse transcriptase (NEB), both according to the manufacturer's instructions. Quantitative real-time PCR amplification of target mRNAs was performed with primers listed below, using the FastStart universal SYBR Green master mix (Roche). The specificity of primers was validated by plotting the dissociation curve. The sample volume of 12.5 µl contained 1x SYBR Green master mix, 10 pmoles of each primer and 10 ng of template. PCR was performed using StepOnePlus Real-Time PCR systems (Applied Biosystems).

The expression of miR-21 was quantified, using LNA-enhanced microRNA assays (Exiqon). 10 ng of total RNA were reverse-transcribed, using the Universal cDNA Synthesis kit II (Exiqon). The cDNAs were then quantified, using the Fast Start Universal SYBR Green master mix (Roche) and LNA-enhanced miRCURY PCR primer sets for miRNAs (Exiqon). For real-time PCRs, thermal-cycling parameters were applied as recommended by the manufacturer (Exiqon). U6 snRNA was used as normalization control.

MicroRNA sequencing: Small RNA library preparation was carried out as described previously [53]. In brief, 100 ng of isolated total RNA was used, with Truncated T4 RNA Ligase 2 for the first ligation to an adenylated 3-adapter, and T4 RNA Ligase 1 in a second

ligation of an RNA adapter to the 5-end of the RNAs. The product was reverse-transcribed using the SuperScript III First Strand Synthesis Super Mix (Invitrogen), followed by a PCR amplification using Phusion polymerase, wherein index sequences and other Illumina-specific sequences were added. The samples were run on 6% urea–PAGE, and the bands corresponding to miRNA-containing PCR amplification products were cut out and eluted overnight in 300 mM NaCl, 2 mM EDTA. The supernatants containing the libraries were collected using Spin-X filter tubes (COSTAR), precipitated with ethanol overnight at −20 °C, pelleted, and dissolved in water. After library pooling, the deep sequencing run was performed on an MiSeq sequencer (50 cycles, single run). Then, FASTQ files were generated from raw BCL output. Sequencing of small RNAs of different myocardial cell fractions (n = 3 from each group) yielded approximately 1 million reads per sample (approximately 85% valid reads) after removing the adaptor sequences, and filtering low quality (Phred Q < 30) and small (less than 12 nucleotides) reads. The remaining high-quality reads were further filtered for unique sequences, counted for each sample, aligned to small RNA reference library (miRNA hairpins from miRBase v21) and read abundances normalized to counts per million using miRDeep2 tool. We then then filtered for microRNAs i.) that had non-zero values in replicates of at least one cell type and ii.) that showed average detection range across all samples of > 3 counts per million. DESeq2 was used to test for differential expression of small RNAs between the samples.

PolyA-RNA sequencing: Intact mRNA was isolated with a peqGOLD RNA pure (Peqlab) kit. Libraries were constructed in a strand-specific manner from 100 - 400 ng of RNA using TruSeq Stranded mRNA sample preparation kit (Illumina, San Diego, California), as described previously [11]. RNA was then fragmented, subjected to two rounds of cDNA synthesis and adapters were then ligated to ds cDNA.

All libraries were sequenced on Illumina HiSeq 4000 generating 100 bp paired-end reads. High quality reads were obtained by trimming adapter sequences, invalid and low quality reads from the raw reads. The clean reads were then mapped to *Mus musculus* 11.1 reference genome by HISAT2 software (v 2.1.0) using default parameters. Then, transcript assemblies were constructed using StringTie software (v 1.3.6). StringTie merge software (v 1.3.6) was used to merge transcripts and DESeq2 software (v 2.11.40.2) was used to compute differential expression.

Single cell sequencing: Cells were isolated from wild type and knockout mice 6 days after TAC surgery. The non-myocyte fraction (approximately 10,000 cells) was loaded into a single channel of the Chromium system (10X Genomics) for each of the samples, and the libraries were prepared according to manufacturer's instructions. Illumina sequencing was then carried out using HiSeq4000.

Cell ranger (v 2.1.0; 10X Genomics) was used to process raw sequencing data and was processed with Seurat (v 3.1.5) [54] for downstream analysis. Sequencing reads were aligned to mouse reference genome 10 (mm10) (Genome Reference Consortium). Cells with < 200 genes or > 3000 genes or mitochondrial genes greater than 5% were filtered out. Expression data was log-normalized, and highly variable genes were detected for linear dimensional reduction using principal component analysis (PCA). Altogether, the filtered data contained 24,862 cells and 19,751 genes. The components that contributed significantly to the dimensionality of the data were identified using a JackStraw test and used for unsupervised graph-based clustering (resolution 0.3) and Uniform Manifold Approximation and Projection (UMAP) embedding and visualization. DoubletFinder was then implemented on this preprocessed Seurat project as described previously [55] to identify and remove doublet cells. Then, the three objects were combined into a single object, using the RunFastMNN algorithm

that scales the values of the two datasets relative to each other and align the cells in the same manner. Dimensionality reduction and unsupervised clustering of cells, as implemented in the Seurat package, was then carried out to identify distinct cell populations within the large data set. This approach allowed to carry out a single integrated analysis on all cells. To reveal heterogeneity within the major cell types, we carried out cell clustering at a high resolution of 0.2. FindMarkers tool within the Seurat package was then used to identify individual marker genes for each cluster. DESeq2 was used to identify differentially expressed genes between two clusters (log2 fold change > 0.25 or log2 fold change < -0.25, and p value <= 0.05). RNA velocities of single cells were estimated using Velocyto and scVelo packages by distinguishing unspliced and spliced mRNA transcripts detected in standard single-cell RNA sequencing protocols as described above.

Gene ontology analysis: Gene ontology enrichment analysis was performed on the top 200 deregulated genes between macrophage cells of two groups using the David bioinformatics tool [56]. A hypergeometric test (Fisher's exact test) was used to calculate the statistical significance of gene overrepresentation followed by a Bonferroni correction for multiple testing to estimate proportion of enriched genes that may occur by chance for the given set of genes. The top significantly enriched GO terms were then analysed to reduce the number of redundant GO terms and visualised using the GOPlot R package.

Ligand receptor pairs: We used the ligand-receptor (LR) pairs compiled by Ramilowski and colleagues [25] to determine the cell-to-cell communications in the cardiac cellulome. A ligand or receptor was defined as 'expressed' in a particular cell type, if the 20% of the cells of that cell type had a TPM expression greater than three. A network linking any two cell types was generated where the ligand was expressed in the first cell type and the receptor was expressed in the latter cell type. The networks were plotted using iTALK and igraph R packages.

Cell culture: Primary bone marrow progenitor cells were isolated from C57BL/6N mice and differentiated into macrophages for 6 days, using RPMI medium containing recombinant 10 ng/ml M-CSF (Peprotech), 1% penicillin/streptomycin and 10% FCS. MiR-21 inhibition in vitro was achieved through transfection of LNA-antimiR-21 (50 nM) or LNA-antimiR-control using Lipofectamine RNAiMax (ThermoFisher). After 5 hours, the medium was replaced with RPMI medium containing 0.1% FCS. After 24 hours, BMDMs were incubated with 5 ng/mL lipopolysaccharide (LPS; Sigma) for 24 hours. Protein quantification in BMDM supernatant was done using the Legendplex (Biolegend) assay on supernatant from stimulated/non-stimulated macrophages.

Macrophage-fibroblast co-culture system: For co-cultivation of macrophages and cardiac fibroblasts, a 2-well chambered co-culture µ-slide (Ibidi; 2 major wells each with 9 microwells) was used. Prior to seeding, the center microwells were coated with 0.18 µg/µl matrigel overnight at 4°C to enable fibroblast cultivation without differentiating these cells into myofibroblasts. Adult mouse cardiac fibroblasts (AMCF) were isolated from 8-10 weeks-old C57BL/6N mice as described above. 20,000 AMCFs in 50 µl of RPMI 1640 medium containing 1% FCS and 1% penicillin/streptomycin were seeded into the center microwell of the chambered co-culture slide. 24 hours later, approx. 6700 mature LPS-stimulated and LNA-antimiR-21-treated BMDMs were added to the 8 microwells surrounding the central microwell that contained the fibroblasts. A 3:1 ratio of fibroblast to macrophages was adjusted to closely mimic the cell ratios in the intact myocardium in vivo. After 48 hours, fibroblasts cells in the center microwell were fixed with 4% paraformaldehyde (5 min) and permeabilized with 0.2% Triton-X (5 min) at room temperature. Cells were then incubated with primary antibodies against vimentin (Abcam #AB24525, Cambridge, UK) and alpha-smooth muscle actin (ACTA2; Sigma #A2547,

Taufkirchen, Germany) for 3 hours at 37°C in a humidified chamber. The cells were then washed with 0.1% Tween20/PBS and incubated with secondary antibodies, anti-mouse Alexa Fluor 488 and anti-chicken Alexa Fluor 568, for 3 hours at 37°C in a humidified chamber. DAPI was used to detect nuclei. Cells were covered with 50% glycerol/PBS and stored at 4°C. Images were acquired using a 10X objective of AxioObserver Z1 (Zeiss, Jena, Germany). Image acquisition and analysis was automated using Metamorph software (Molecular Devices, Downington, U.S.A.).

Data availability

All NGS datasets were deposited to the European Nucleotide Archive (ENA). The accession numbers for the datasets are as follows:

1. Small RNA-seq of myocardial cell types (PRJEB41089)
2. Small RNA-seq of cardiac macrophages after pressure overload and Sham (PRJEB41096)
3. RNA-seq of cardiac macrophages (PRJEB41314
4. scRNA-seq of nonmyocytes (PRJEB41145)

Supplemental Figures and Figure Legends

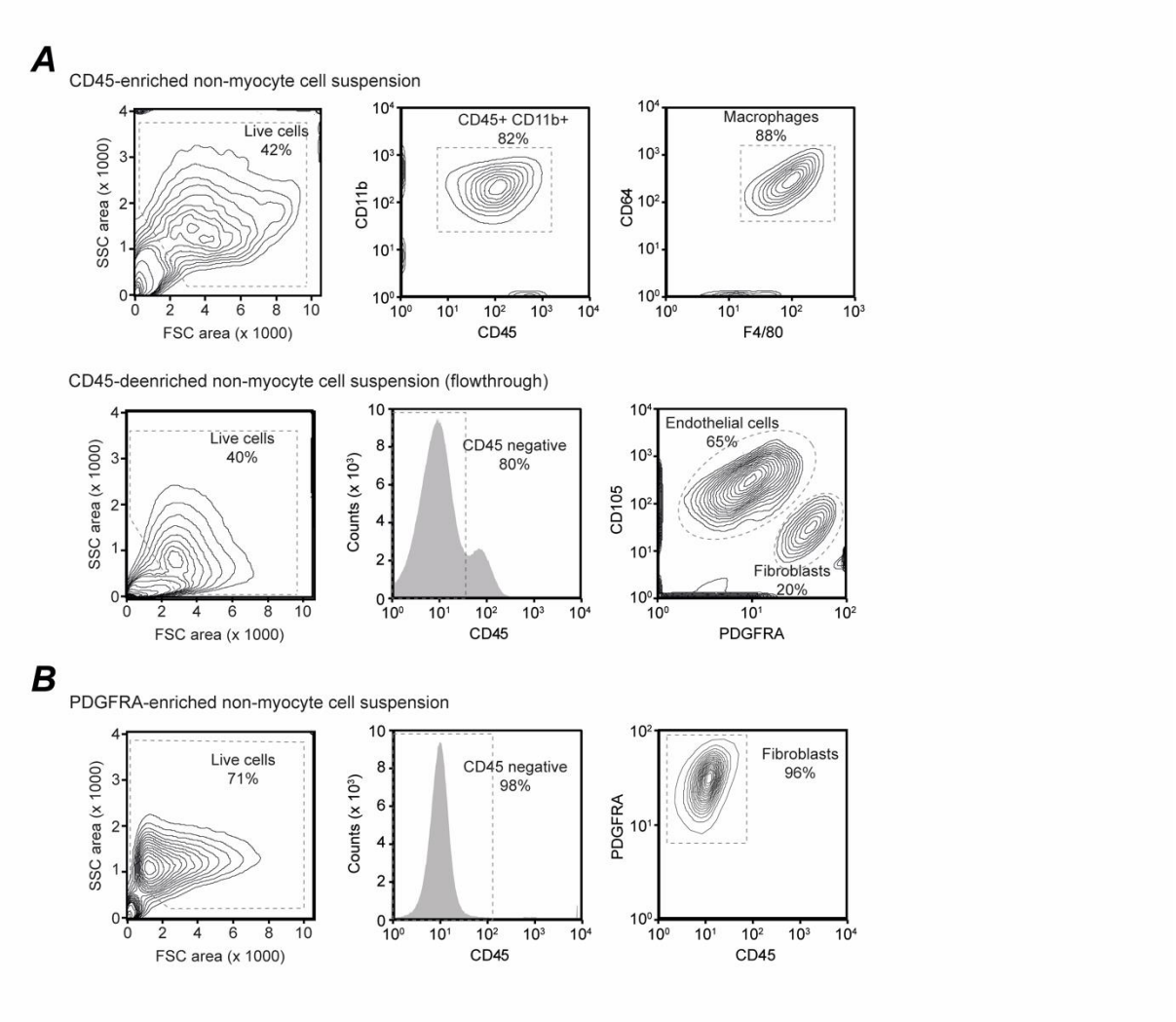

Figure I. Magnetic activated cell sorting (MACS) and fluorescence activated cell sorting (FACS) strategy to isolate different cardiac cell types.

(A) Strategy to isolate different myocardial cell types. Nonmyocyte cells were enriched for immune cells by magnetic sorting using magnetic microbeads-conjugated anti-CD45 antibody. The flowthrough cell suspension was enriched for fibroblasts and endothelial cells. *Top*, representative flow cytometry plots indicating gating strategy used on CD45-enriched cell suspension to isolate purified cardiac macrophages. *Bottom*, representative flow cytometry plots indicating gating strategy used on CD45-deenriched cell suspension

(flowthrough) to isolate purified cardiac endothelial cells and cardiac fibroblasts. **(B)** Strategy to isolate cardiac fibroblasts. Nonmyocyte cells were enriched for fibroblasts by magnetic sorting using magnetic microbeads-conjugated anti-PDGFRA antibody. Representative flow cytometry plots of PDGFRA-enriched cell suspension to isolate purified cardiac fibroblasts. Anti-CD45 antibody was used as an exclusion marker to isolate pure fibroblast fraction.

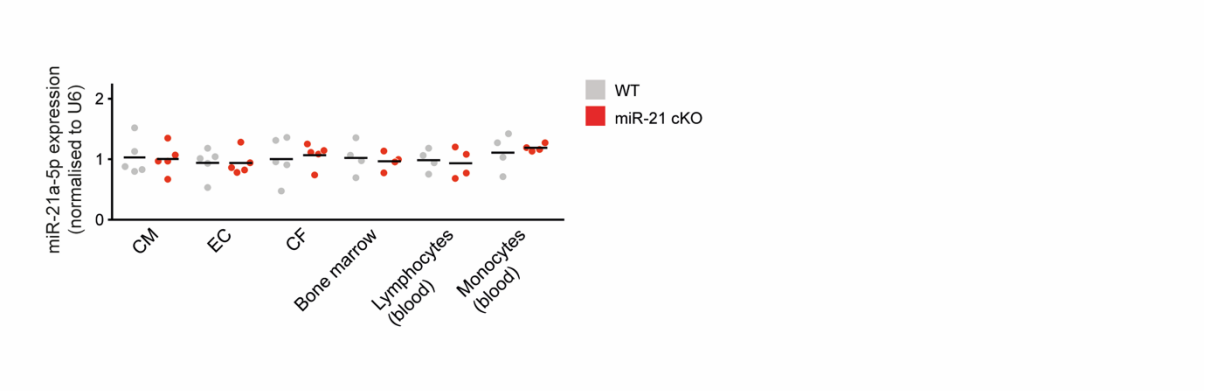

Figure II. Quantification of miR-21 in myocardial cell types and myeloid cells.

Quantitative assessment of endogenous miR-21a-5p in other myocardial cell types (cardiac myocytes (CM), endothelial cells (EC) and cardiac fibroblasts (CF)) and myeloid cell types (bone marrow, blood lymphocytes and blood monocytes) isolated from wild type and miR-21 cKO mice. n=4-5 mice per group.

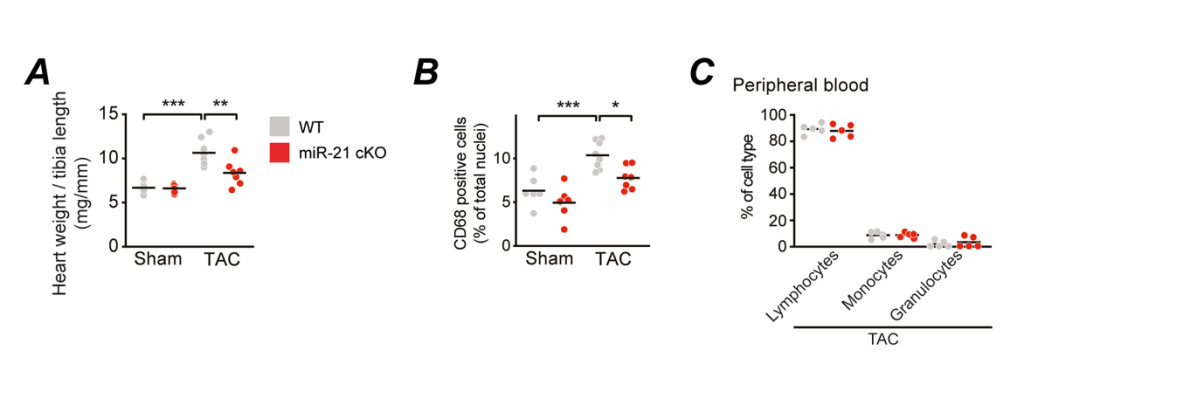

Figure III. Macrophage-specific deletion of miR-21 prevents pressure overload-induced cardiac hypertrophy in mice.

(A) Eight-weeks old wild type and miR-21 cKO mice were subjected to either TAC or Sham surgery and hearts were harvested four weeks later. Ratio of heart weight to tibia length (HW/TL). **(B)** Quantitative analysis of immunofluorescence staining with an antibody directed against CD68 (macrophage marker) of sections from left ventricular myocardium. WT Sham n=6; miR-21 cKO Sham n=7; WT TAC n=10; miR-21 cKO TAC n=7. **(C)** Lineage distribution of peripheral blood analyzed by the ADVIA hematology analyzer system. WT TAC n=5; miR-21 cKO n=5. Data are mean and individual points and were analyzed using two-way analysis of variance (ANOVA) with Sidaks' posttest. *P<0.05, **P<0.01 and ***P<0.001.

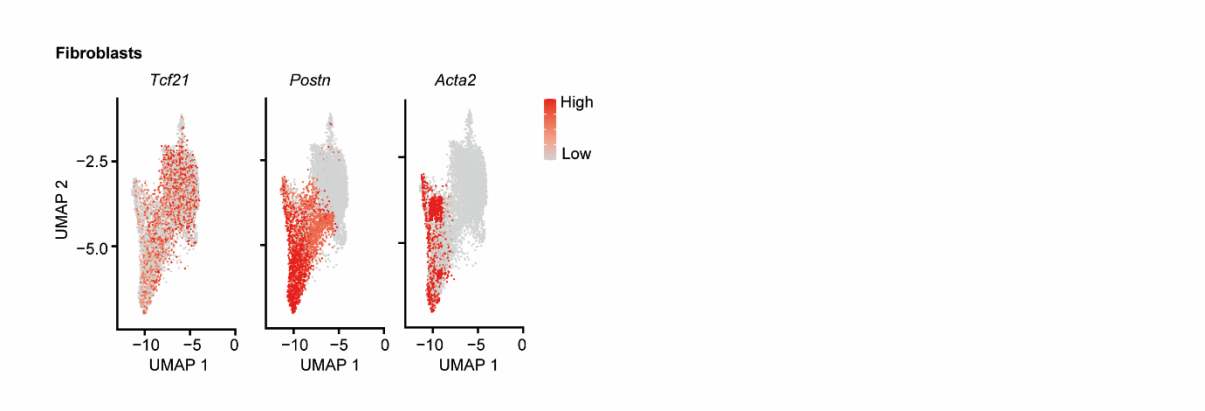

Figure IV. Expression of fibroblast marker genes within the different fibroblast clusters.

Feature plot of single cell transcriptomes labeling cells that express *Tcf21*, *Postn* and *Acta2*.

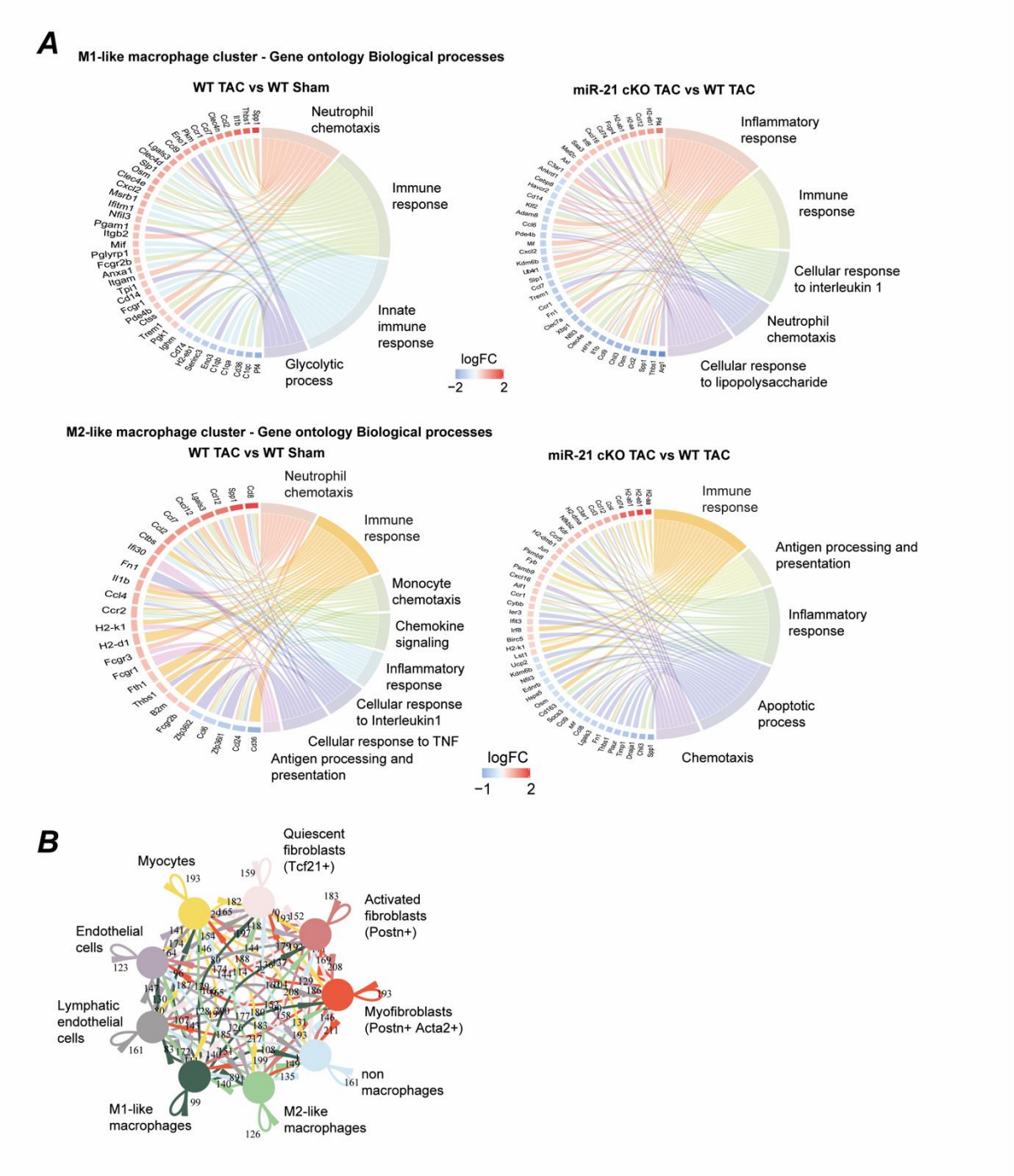

Figure V. Gene ontology analysis of transcriptomes of macrophage clusters and analysis of intracellular communication between cardiac cell types.

(A) Gene ontology (GO) enrichment analysis on biological processes of top 200 deregulated genes in M1-like macrophages and M2-like macrophages in WT TAC vs WT Sham and miR-

21 cKO TAC vs WT TAC. **(B)** Network diagrams of the paracrine interactions between different cardiac cell fractions under Sham conditions. The line color indicates ligands broadcast by the cell population of the same color. The line thickness is proportional to the number of ligands where cognate receptors are present in the recipient cell population and numbers indicate the quantity of ligand-receptor pairs for each inter-population link. Ligand or receptor is considered to be expressed when it is detected in at least 20 percent of a cell population.

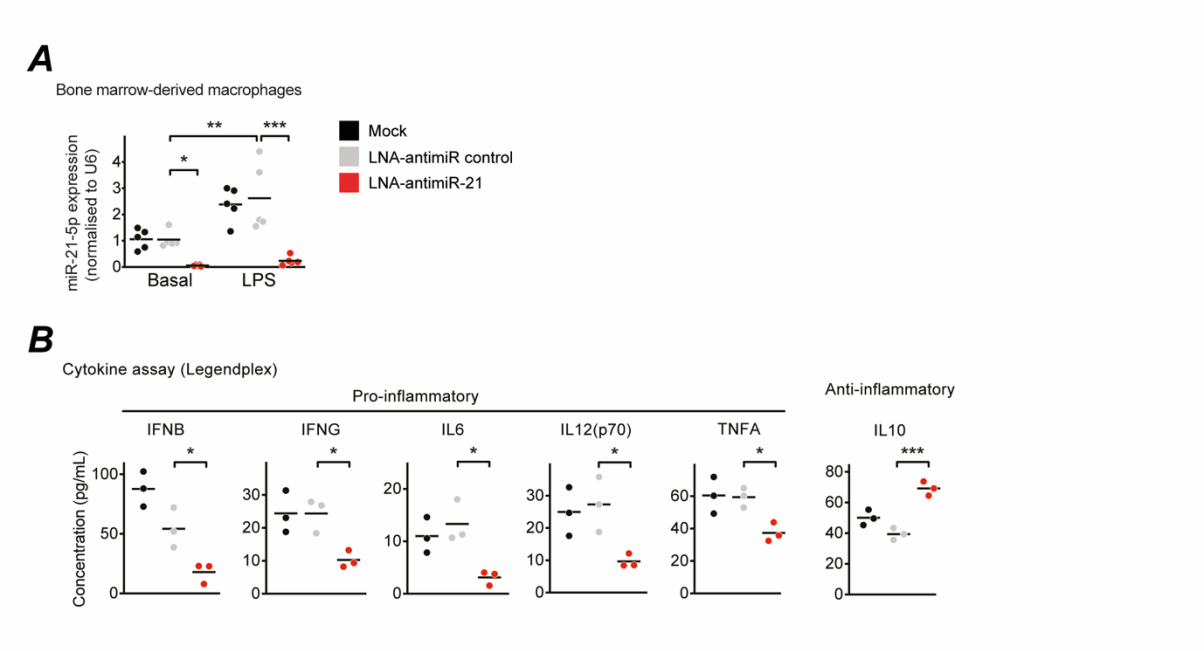

Figure VI. Silencing of miR-21 in bone marrow-derived macrophages and cytokine assays.

(A) Relative abundance of miR-21 in bone marrow-derived macrophages 48 hours after transfection with either LNA-antimiR-21 or LNA-antimiR control. n=5 per group. **(B)** Bone marrow-derived macrophages were transfected with either LNA-antimiR-21 or LNA-antimiR control. After 72 hours, supernatants were collected and the levels of chemokines (IFNB, IFNG, IL6, IL12(p70), TNFA and IL10) were detected using Legendplex multi-analyte flow assay kits. n=3. Data are mean and individual values and were analyzed either using two-way (A) or one-way (B) analysis of variance (ANOVA) with Sidaks' posttest. *P<0.05, **P<0.01 and ***P<0.001.

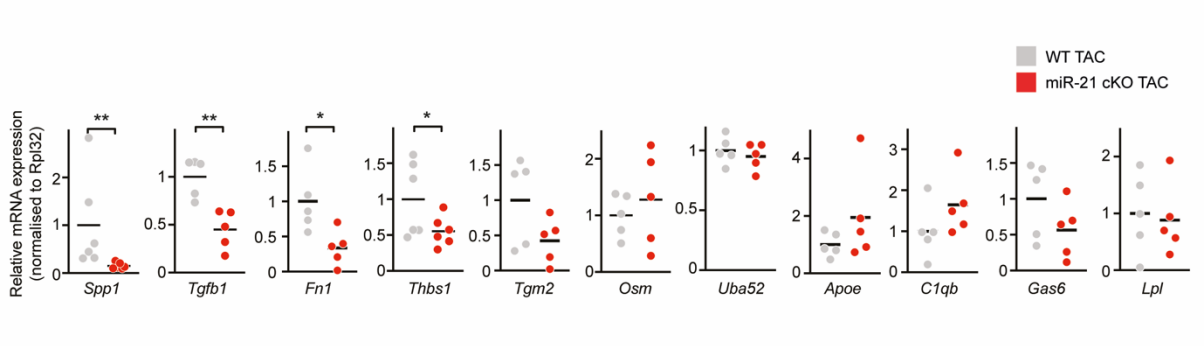

Figure VII. Expression of ligand genes in myocardial tissue after genetic deletion of miR-21 in macrophages.

Quantitative PCR assessment of mRNA levels of genes encoding the ligands as identified in Figure 4B in the wild type and miR-21 cKO mice subjected to pressure overload. Data are from 5 animals per group with 3 technical replicates each. Data are mean and individual values and were analyzed using Students' t-test or Mann-Whitney test (*Spp1* and *C1qb*). *P<0.05 and **P<0.01.

Supplemental Tables

Table I. Key Resources Table

Reagent or resource	Source	Identifier
Primers for PCR		
Acta1 mouse forward primer. Sequence: 5'-CCCAAAGCTAACCGGGAGAAG-3'	This work	NA
Acta1 mouse reverse primer. Sequence: 5'-CCAGAATCCAACACGATGCC-3'	This work	NA
Apoe mouse forward primer. Sequence: 5'-AACCGCTTCTGGGATTACCT-3'	This work	NA
Apoe mouse reverse primer. Sequence: 5'-TCCGTCATAGTGTCCTCCATC-3'	This work	NA
C1qb mouse forward primer. Sequence: 5'-ACCAGGCACTCCAGGGATAA-3'	This work	NA
C1qb mouse reverse primer. Sequence: 5'-CCCTTTCTCTCCAAACTCACC-3'	This work	NA
Col1a1 mouse forward primer. Sequence: 5'-CTGGCAAGAAGGGAGATGA-3'	This work	NA
Col1a1 mouse forward primer. Sequence: 5'-CACCATCCAAACCACTGAAA-3'	This work	NA
Col1a2 mouse forward primer. Sequence: 5'-AGGTCTTCCTGGAGCTGATG-3′	This work	NA
Col1a2 mouse reverse primer. Sequence: 5'-ACCCACAGGGCCTTCTTTAC-3′	This work	NA
Col3a1 mouse forward primer. Sequence: 5'-ACAGCAAATTCACTTACACAGTTC-3′	This work	NA
Col3a1 mouse reverse primer. Sequence: 5'-CTCATTGCCTTGCGTGTTT-3′	This work	NA
Fn1 mouse forward primer. Sequence: 5'- AAGGTTCGGGAAGAGGTTGT-3′	This work	NA
Fn1 mouse reverse primer. Sequence: 5'-ACTCCTCTCCAATGGCGTAA-3′	This work	NA
Gas6 mouse forward primer. Sequence: 5'-GGGAATGGATTTGCTACCTAC-3'	This work	NA

Gas6 mouse reverse primer. Sequence: 5'-TAACTTCCCAGGTGGTTTCC-3'	This work	NA
Il6 mouse forward primer. Sequence: 5'-AGTTGCCTTCTTGGGACTGA-3'	This work	NA
Il6 mouse reverse primer. Sequence: 5'-CAGAATTGCCATTGCACAAC-3'	This work	NA
Lpl mouse forward primer. Sequence: 5'-GAGCGAGAACATTCCCTTCA-3'	This work	NA
Lpl mouse reverse primer. Sequence: 5'-TGTCCACCTCCGTGTAAATC-3'	This work	NA
Myh7 mouse forward primer. Sequence: 5'-ACTGTCAACACTAAGAGGGTCA-3'	This work	NA
Myh7 mouse reverse primer. Sequence: 5'-TTGGATGATTTGATCTTCCAGGG-3'	This work	NA
Nos2 mouse forward primer. Sequence: 5'-AGGGAATCTTGGAGCGAGTT-3'	This work	NA
Nos2 mouse reverse primer. Sequence: 5'-GCAGCCTCTTGTCTTTGACC-3'	This work	NA
Nppa mouse forward primer. Sequence: 5'-GCTTCCAGGCCATATTGGAG-3'	This work	NA
Nppa mouse reverse primer. Sequence: 5'-GGGGGCATGACCTCATCTT-3'	This work	NA
Nppb mouse forward primer. Sequence: 5'-CCCAAAAAGAGTCCTTCGGTC-3'	This work	NA
Nppb mouse reverse primer. Sequence: 5'-CGGTCTATCTTGTGCCCAAAG-3'	This work	NA
Osm mouse forward primer. Sequence: 5'-CAACTCTTCCTCTCAGCTCCTC-3'	This work	NA
Osm mouse reverse primer. Sequence: 5'-CAGGTCAGGTGTGTTCAGGTT-3'	This work	NA
Rpl32 mouse forward primer. Sequence: 5'-ACATCGGTTATGGGAGCAAC-3'	This work	NA
Rpl32 mouse reverse primer. Sequence: 5'-GGGATTGGTGACTCTGATGG-3'	This work	NA
Spp1 mouse forward primer. Sequence: 5'- CTGGCAGCTCAGAGGAGAAG-3'	This work	NA
Spp1 mouse reverse primer. Sequence: 5'- CTGTGGCGCAAGGAGATT-3'	This work	NA
Tgfb1 mouse forward primer. Sequence: 5'-GAGAGCCCTGGATACCAACT-3'	This work	NA
Tgfb1 mouse reverse primer. Sequence: 5'-CAACCCAGGTCCTTCCTAAA-3'	This work	NA

Tgm2 mouse forward primer. Sequence: 5'-GGCACTGAGGACATCAACCT-3'	This work	NA
Tgm2 mouse reverse primer. Sequence: 5'-AGGCACCCGCTGTACTTCT-3'	This work	NA
Thbs1 mouse forward primer. Sequence: 5'-AAAGGTGTCCTGTCCCATCA-3'	This work	NA
Thbs1 mouse reverse primer. Sequence: 5'-TCCACTCAGACCAGGGAGAC-3'	This work	NA
Tnf mouse forward primer. Sequence: 5'-TCTTCTCATTCCTGCTTGTGG-3'	This work	NA
Tnf mouse reverse primer. Sequence: 5'- GGTCTGGGCCATAGAACTGA-3'	This work	NA
Uba52 mouse forward primer. Sequence: 5'-CCTGTCCGACTACAACATCCA-3'	This work	NA
Uba52 mouse reverse primer. Sequence: 5'-TGTACTTCTGGGCAAGCTGA-3'	This work	NA
miRCURY LNA miRNA PCR Assay for miR-21-5p	Exiqon, Vedbaek, Denmark	#339306
miRCURY LNA miRNA PCR Assay for U6	Exiqon, Vedbaek, Denmark	#339306
Reagents for RNA isolation and reverse transcription		
RNAPure, PeqGOLD	VWR, Ismaning, Germany	#732-3312
Invitrogen™ SuperScript™ II Reverse Transcriptase	ThermoFisher Scientific, Darmstadt, Germany	#18064014
Universal cDNA Synthesis Kit II (for microRNA PCR)	Exiqon, Vedbaek, Denmark	#339340
TruSeq Stranded mRNA Library Prep Kit	Illumina, San Diego, USA	RS-122-2101
Single Cell Sequencing Kit v 2.1	10x Genomics, Pleasanton, California	
TruSeq small RNA Library Prep Kit	Illumina, San Diego, USA	RS-200-0012
Antibodies used for MACS/FACS		
rat anti-mouse CD16/CD32 (clone 2.4G2)	BD Biosciences, San Jose, California	#553142 (RRID: AB_394657)
Biotin-conjugated anti-CD45 (clone 30-F11)	eBioscience/ Thermofisher Scientific, Darmstadt, Germany	#13-0451-82 (RRID: AB_466446)
Biotin-conjugated anti-PDGFRA (clone APA5)	eBioscience/ Thermofisher Scientific, Darmstadt, Germany	#13-1401-82 (RRID: AB_466607)

anti-PDGFRA-PECy7 (clone APA5)	eBioscience/ Thermofisher Scientific, Darmstadt, Germany	#25-1401-82 (RRID: AB_2573400)
anti-CD105-PE (clone MJ7/18)	eBioscience/ Thermofisher Scientific, Darmstadt, Germany	#12-1051-82 (RRID: AB_657524)
anti-CD45-Alexa Fluor® 488 (clone 30-F11)	Biolegend, San Diego, California	#103121 (RRID: AB_493532)
anti-CD11b-PE (clone M1/70)	BD Biosciences, San Jose, California	#553311 (RRID: AB_394775)
anti-CD64-PE/Dazzle 594 (clone X54-5/7.1)	Biolegend, San Diego, California	#139319 (RRID: AB_2566558)
anti-F4/80-PeCy7 (clone BM8)	eBioscience/ Thermofisher Scientific, Darmstadt, Germany	#25-4801-82 (RRID: AB_469653)
Streptavidin Micro Beads	Miltenyi Biotech, Bergisch Gladbach, Germany	#130-048-101
Antibodies/reagents for immunofluorescence/immunohistochemistry		
anti-alpha smooth muscle actin (clone 1A4; diluted 1:200 in 3% goat serum/PBS)	Sigma, Taufkirchen, Germany	#A2547 (RRID: AB_476701)
anti-BrdU (diluted 1:100 in 3% goat serum/PBS)	Abcam, Cambridge, UK	#AB6326 (RRID: AB_305426)
Anti-CD68 (diluted 1:100 in 3% goat serum/PBS)	Abcam, Cambridge, UK	#AB222914
anti-MRC1 (diluted 1:100 in 3% goat serum)	Abcam, Cambridge, UK	#AB64693 (RRID: AB_1523910)
anti-Vimentin (diluted 1:200 in 3% goat serum/PBS)	Abcam, Cambridge, UK	#AB24525 (RRID: AB_778824)
Invitrogen™ Goat anti-chicken IgY (H+L), Alexa Fluor® 594 (diluted 1:100 in 0.1% Tween20/PBS)	ThermoFisher Scientific, Darmstadt, Germany	A-11042 (RRID: AB_2534099)
Invitrogen™ Goat anti-mouse IgG (H+L), Alexa Fluor® 488 (diluted 1:100 in 0.1% Tween20/PBS)	ThermoFisher Scientific, Darmstadt, Germany	A-11029 (RRID: AB_138404)
Invitrogen™ Goat anti-rabbit IgG (H+L), Alexa Fluor® 568 (diluted 1:100 in 0.1% Tween20/PBS)	ThermoFisher Scientific, Darmstadt, Germany	A-11036 (RRID: AB_ 10563566)
Invitrogen™ Goat anti-rat IgG (H+L), Alexa Fluor® 647 (diluted 1:100 in 0.1% Tween20/PBS)	ThermoFisher Scientific, Darmstadt, Germany	A-21247 (RRID: AB_141778)

Invitrogen™ DAPI (4',6-diamidino-2-phenylindole, dihydrochloride)	Life Technologies/ Thermofisher Scientific, Darmstadt, Germany	#D1306 (RRID: AB_2629482)
Invitrogen™ SYTOX™ Green (diluted 1:1000 in 0.1% Tween20/PBS)	Life Technologies/ Thermofisher Scientific, Darmstadt, Germany	#S7020
Invitrogen™ Wheat germ agglutinin, Alexa Fluor 647 conjugated (diluted 1:1000 in PBS)	Life Technologies/ Thermofisher Scientific, Darmstadt, Germany	#W32466
Reagents for cell culture		
5-bromo-2′-deoxyuridine (Roche)	Merck Sigma Aldrich, Taufkirchen, Germany	#10280879001
RPMI 1640 Medium	Life Technologies/ Thermofisher Scientific, Darmstadt, Germany	#12633012
Recombinant murine M-CSF	Peprotech, Rocky Hill, NJ	#315-02
Lipopolysaccharide (E. coli O55-B8)	Sigma Aldrich, Saint Louis, Missouri	#L2880
LNA-antimiR-21-5p. Sequence: 5'-TCAGTCTGATAAGCT-3'	Exiqon, Vedbaek, Denmark	#199900 (Batch no: 172582)
LNA-antimiR-39-3p. Sequence: 5'-TGATTTACACCCGGTG-3'	Exiqon, Vedbaek, Denmark	#339147YCI0200562-FFA
Lipofectamine RNAiMax	ThermoFisher Scientific, Darmstadt, Germany	#13778100
2-well chambered co-culture µ-slide	IBIDI, Munich, Germany	#81806
Softwares		
DAVID bioinformatics tool	Huang et al [56]	v 6.8
DESeq2	Love et al [57]	v 2.11.40.2
Doublet Finder	McGinnis et al [55]	v 2.0.3
GoPlot		v 1.0.2
HISAT2	Kim et al [58]	v 2.1.0
iTALK	Wang et al [59]	v 0.1.0
Metamorph	Molecular Devices, San Jose, California	v 7.10.1.161
scvelo	Bergen et al [60]	v 0.2.3
Seurat	Butler et al [54]	v 3.1.5
StringTie	Pertea et al [61]	v 1.3.6

StringTie merge	Pertea et al [61]	v 1.3.6
Velocyto	Manno et al [62]	v 0.6
Vevolab	Fujifilm Visual Sonics, Toronto, Canada	
VevoStrain	Fujifilm Visual Sonics, Toronto, Canada	

Table II. Top significantly deregulated genes after miR-21 deletion in macrophages

Gene_name	Fold_change(log2)	Cell_type	Group_comparison
Spp1	2.29	MP	WT TAC vs WT Sham
Chil3	2.15	MP	WT TAC vs WT Sham
Il1b	2.02	MP	WT TAC vs WT Sham
Plac8	1.73	MP	WT TAC vs WT Sham
Mb	-1.69	MP	WT TAC vs WT Sham
Cox6a2	-1.65	MP	WT TAC vs WT Sham
Fn1	1.62	MP	WT TAC vs WT Sham
Thbs1	1.61	MP	WT TAC vs WT Sham
Srgn	1.59	MP	WT TAC vs WT Sham
Lgals3	1.56	MP	WT TAC vs WT Sham
Ccl8	1.50	MP	WT TAC vs WT Sham
Atp2a2	-1.48	MP	WT TAC vs WT Sham
Pln	-1.48	MP	WT TAC vs WT Sham
Cd36	-1.46	MP	WT TAC vs WT Sham
Actc1	-1.44	MP	WT TAC vs WT Sham
Arg1	1.37	MP	WT TAC vs WT Sham
mt-Atp6	-1.37	MP	WT TAC vs WT Sham
Tgfbi	1.37	MP	WT TAC vs WT Sham
Fabp3	-1.36	MP	WT TAC vs WT Sham
Mt2	1.34	MP	WT TAC vs WT Sham
S100a11	1.33	MP	WT TAC vs WT Sham
Slc25a4	-1.32	MP	WT TAC vs WT Sham
Anxa2	1.32	MP	WT TAC vs WT Sham
Hp	1.30	MP	WT TAC vs WT Sham
Ckm	-1.27	MP	WT TAC vs WT Sham
Ccl2	1.27	MP	WT TAC vs WT Sham
Cox7a1	-1.25	MP	WT TAC vs WT Sham
Cxcl2	1.25	MP	WT TAC vs WT Sham
Plaur	1.22	MP	WT TAC vs WT Sham
Ly6c2	1.22	MP	WT TAC vs WT Sham
Pkm	1.18	MP	WT TAC vs WT Sham
Cox8b	-1.18	MP	WT TAC vs WT Sham
Lpl	-1.18	MP	WT TAC vs WT Sham
Eno1	1.17	MP	WT TAC vs WT Sham
Vim	1.16	MP	WT TAC vs WT Sham

Hspa8	1.15	MP	WT TAC vs WT Sham
Clec4n	1.15	MP	WT TAC vs WT Sham
Chchd10	-1.12	MP	WT TAC vs WT Sham
S100a4	1.12	MP	WT TAC vs WT Sham
Ccr2	1.11	MP	WT TAC vs WT Sham
Ckmt2	-1.11	MP	WT TAC vs WT Sham
Hspa5	1.11	MP	WT TAC vs WT Sham
Igfbp7	1.10	MP	WT TAC vs WT Sham
Ms4a4c	1.10	MP	WT TAC vs WT Sham
Wfdc17	-1.10	MP	WT TAC vs WT Sham
Marcks	-1.10	MP	WT TAC vs WT Sham
Actg1	1.09	MP	WT TAC vs WT Sham
Ms4a6d	1.09	MP	WT TAC vs WT Sham
Ctss	1.09	MP	WT TAC vs WT Sham
Ccl7	1.08	MP	WT TAC vs WT Sham
Tnnc1	-1.08	MP	WT TAC vs WT Sham
Ccl12	1.08	MP	WT TAC vs WT Sham
Ifi30	1.08	MP	WT TAC vs WT Sham
Gm28438	1.07	MP	WT TAC vs WT Sham
Socs3	1.07	MP	WT TAC vs WT Sham
Timp1	1.07	MP	WT TAC vs WT Sham
mt-Co2	-1.06	MP	WT TAC vs WT Sham
mt-Co3	-1.05	MP	WT TAC vs WT Sham
Dnaja1	1.04	MP	WT TAC vs WT Sham
Ftl1-ps1	-1.04	MP	WT TAC vs WT Sham
Ccr1	1.03	MP	WT TAC vs WT Sham
Mybpc3	-1.02	MP	WT TAC vs WT Sham
S100a6	1.02	MP	WT TAC vs WT Sham
Ccl24	-1.00	MP	WT TAC vs WT Sham
Ldhb	-1.00	MP	WT TAC vs WT Sham
Osm	1.00	MP	WT TAC vs WT Sham
Btg1	0.99	MP	WT TAC vs WT Sham
Fxyd5	0.99	MP	WT TAC vs WT Sham
Capg	0.99	MP	WT TAC vs WT Sham
Maf	-0.98	MP	WT TAC vs WT Sham
Zfp36l1	-0.97	MP	WT TAC vs WT Sham
Cd52	0.96	MP	WT TAC vs WT Sham

Cd14	0.95	MP	WT TAC vs WT Sham
Ptpn1	0.95	MP	WT TAC vs WT Sham
Eno3	-0.93	MP	WT TAC vs WT Sham
Crip2	-0.93	MP	WT TAC vs WT Sham
Emb	0.92	MP	WT TAC vs WT Sham
Clec4d	0.91	MP	WT TAC vs WT Sham
Vcan	0.91	MP	WT TAC vs WT Sham
Eif4a1	0.91	MP	WT TAC vs WT Sham
Apoe	-0.91	MP	WT TAC vs WT Sham
Tcap	-0.91	MP	WT TAC vs WT Sham
Slpi	0.89	MP	WT TAC vs WT Sham
Clec4e	0.88	MP	WT TAC vs WT Sham
Sirpb1c	0.88	MP	WT TAC vs WT Sham
Zbtb20	-0.87	MP	WT TAC vs WT Sham
Ldha	0.87	MP	WT TAC vs WT Sham
Cstb	0.86	MP	WT TAC vs WT Sham
Hrc	-0.85	MP	WT TAC vs WT Sham
Cltc	-0.85	MP	WT TAC vs WT Sham
Ctsd	0.84	MP	WT TAC vs WT Sham
Mgl2	-0.84	MP	WT TAC vs WT Sham
Msrb1	0.84	MP	WT TAC vs WT Sham
Tspo	0.84	MP	WT TAC vs WT Sham
Ltc4s	-0.83	MP	WT TAC vs WT Sham
Nfkbia	0.83	MP	WT TAC vs WT Sham
Hsp90aa1	0.82	MP	WT TAC vs WT Sham
Hmox1	0.82	MP	WT TAC vs WT Sham
Napsa	0.82	MP	WT TAC vs WT Sham
Gm10076	0.81	MP	WT TAC vs WT Sham
Xbp1	0.81	MP	WT TAC vs WT Sham
Tmsb10	0.81	MP	WT TAC vs WT Sham
Mdh1	-0.81	MP	WT TAC vs WT Sham
Sptbn1	-0.81	MP	WT TAC vs WT Sham
Ndufa5	-0.80	MP	WT TAC vs WT Sham
Taldo1	0.80	MP	WT TAC vs WT Sham
Fcgr1	0.80	MP	WT TAC vs WT Sham
Pim1	0.80	MP	WT TAC vs WT Sham
mt-Rnr1	0.79	MP	WT TAC vs WT Sham

Prdx6	0.79	MP	WT TAC vs WT Sham
Slc16a3	0.77	MP	WT TAC vs WT Sham
Msr1	0.77	MP	WT TAC vs WT Sham
Ifitm1	0.76	MP	WT TAC vs WT Sham
Etfb	-0.76	MP	WT TAC vs WT Sham
Kdr	-0.75	MP	WT TAC vs WT Sham
S100a10	0.75	MP	WT TAC vs WT Sham
Bcl2a1d	0.75	MP	WT TAC vs WT Sham
Pf4	-0.75	MP	WT TAC vs WT Sham
Ctsz	0.75	MP	WT TAC vs WT Sham
Fxyd2	-0.75	MP	WT TAC vs WT Sham
Hpgd	-0.75	MP	WT TAC vs WT Sham
Bcl2a1b	0.74	MP	WT TAC vs WT Sham
AA467197	0.74	MP	WT TAC vs WT Sham
Qk	-0.74	MP	WT TAC vs WT Sham
Cdkn1a	0.74	MP	WT TAC vs WT Sham
Ltb4r1	0.74	MP	WT TAC vs WT Sham
Pgam1	0.73	MP	WT TAC vs WT Sham
Rpl10-ps3	-0.73	MP	WT TAC vs WT Sham
F630028O10Rik	-0.72	MP	WT TAC vs WT Sham
Ass1	0.72	MP	WT TAC vs WT Sham
Fcgr3	0.72	MP	WT TAC vs WT Sham
Uqcr11	-0.72	MP	WT TAC vs WT Sham
Ctsl	0.72	MP	WT TAC vs WT Sham
Hexb	0.71	MP	WT TAC vs WT Sham
Serinc3	-0.71	MP	WT TAC vs WT Sham
Pgk1	0.71	MP	WT TAC vs WT Sham
mt-Rnr2	0.71	MP	WT TAC vs WT Sham
Dpysl2	-0.71	MP	WT TAC vs WT Sham
Cryab	-0.71	MP	WT TAC vs WT Sham
Gm11808	-0.71	MP	WT TAC vs WT Sham
Eif5a	0.70	MP	WT TAC vs WT Sham
Slfn2	0.70	MP	WT TAC vs WT Sham
Gda	0.69	MP	WT TAC vs WT Sham
Itgb2	0.69	MP	WT TAC vs WT Sham
Cytip	0.69	MP	WT TAC vs WT Sham
Ech1	-0.69	MP	WT TAC vs WT Sham

Fcgr2b	0.69	MP	WT TAC vs WT Sham
Plin2	0.69	MP	WT TAC vs WT Sham
Adrb2	-0.69	MP	WT TAC vs WT Sham
Fabp4	-0.68	MP	WT TAC vs WT Sham
Anxa1	0.68	MP	WT TAC vs WT Sham
Mtss1	-0.68	MP	WT TAC vs WT Sham
Cavin2	-0.68	MP	WT TAC vs WT Sham
Des	-0.68	MP	WT TAC vs WT Sham
Tmcc1	-0.67	MP	WT TAC vs WT Sham
Gngt2	0.67	MP	WT TAC vs WT Sham
Rps27rt	-0.67	MP	WT TAC vs WT Sham
Pgam2	-0.67	MP	WT TAC vs WT Sham
Samsn1	0.67	MP	WT TAC vs WT Sham
Mef2c	-0.66	MP	WT TAC vs WT Sham
Tcf4	-0.66	MP	WT TAC vs WT Sham
Wwp1	-0.66	MP	WT TAC vs WT Sham
Ryr2	-0.66	MP	WT TAC vs WT Sham
Il4ra	0.66	MP	WT TAC vs WT Sham
Aprt	0.66	MP	WT TAC vs WT Sham
Tgm2	0.66	MP	WT TAC vs WT Sham
Mcemp1	0.66	MP	WT TAC vs WT Sham
Selenop	-0.66	MP	WT TAC vs WT Sham
Manf	0.65	MP	WT TAC vs WT Sham
Lyve1	-0.65	MP	WT TAC vs WT Sham
BC005537	-0.65	MP	WT TAC vs WT Sham
Lilr4b	0.65	MP	WT TAC vs WT Sham
Nfil3	0.65	MP	WT TAC vs WT Sham
Idh2	-0.65	MP	WT TAC vs WT Sham
Igfbp4	-0.65	MP	WT TAC vs WT Sham
Ier3	0.65	MP	WT TAC vs WT Sham
Rps2-ps10	-0.65	MP	WT TAC vs WT Sham
Fhl2	-0.64	MP	WT TAC vs WT Sham
Obscn	-0.64	MP	WT TAC vs WT Sham
Ms4a6c	0.64	MP	WT TAC vs WT Sham
Raph1	-0.64	MP	WT TAC vs WT Sham
Myom1	-0.64	MP	WT TAC vs WT Sham
Emilin2	0.64	MP	WT TAC vs WT Sham

Plbd1	0.63	MP	WT TAC vs WT Sham
Stard8	-0.63	MP	WT TAC vs WT Sham
Arpc1b	0.62	MP	WT TAC vs WT Sham
Dmkn	0.62	MP	WT TAC vs WT Sham
Slc25a5	0.62	MP	WT TAC vs WT Sham
Kctd12	-0.62	MP	WT TAC vs WT Sham
Grcc10	-0.62	MP	WT TAC vs WT Sham
Ndufa13	-0.62	MP	WT TAC vs WT Sham
Ndrg2	-0.62	MP	WT TAC vs WT Sham
Ndufb4	-0.62	MP	WT TAC vs WT Sham
Cd163	-0.62	MP	WT TAC vs WT Sham
Atp5g1	-0.62	MP	WT TAC vs WT Sham
Fxyd1	-0.62	MP	WT TAC vs WT Sham
H2-D1	0.61	MP	WT TAC vs WT Sham
Ndufb9	-0.61	MP	WT TAC vs WT Sham
F10	0.61	MP	WT TAC vs WT Sham
Mif	0.61	MP	WT TAC vs WT Sham
Arg1	-1.28	MP	miR-21 cKO TAC vs WT TAC
Thbs1	-1.26	MP	miR-21 cKO TAC vs WT TAC
Mt2	-1.20	MP	miR-21 cKO TAC vs WT TAC
Spp1	-1.14	MP	miR-21 cKO TAC vs WT TAC
Chil3	-1.10	MP	miR-21 cKO TAC vs WT TAC
S100a4	-1.06	MP	miR-21 cKO TAC vs WT TAC
Srgn	-1.05	MP	miR-21 cKO TAC vs WT TAC
Plaur	-1.05	MP	miR-21 cKO TAC vs WT TAC
S100a6	-1.01	MP	miR-21 cKO TAC vs WT TAC
Rps28	-0.96	MP	miR-21 cKO TAC vs WT TAC
Mt1	-0.90	MP	miR-21 cKO TAC vs WT TAC
S100a11	-0.89	MP	miR-21 cKO TAC vs WT TAC
H2-Eb1	0.88	MP	miR-21 cKO TAC vs WT TAC
Anxa2	-0.87	MP	miR-21 cKO TAC vs WT TAC
Cd72	0.86	MP	miR-21 cKO TAC vs WT TAC
Rps29	-0.82	MP	miR-21 cKO TAC vs WT TAC
Il1b	-0.82	MP	miR-21 cKO TAC vs WT TAC
Osm	-0.79	MP	miR-21 cKO TAC vs WT TAC
Gm10076	-0.78	MP	miR-21 cKO TAC vs WT TAC
Igfbp7	-0.78	MP	miR-21 cKO TAC vs WT TAC

AC121965.1	-0.78	MP	miR-21 cKO TAC vs WT TAC
Vcan	-0.77	MP	miR-21 cKO TAC vs WT TAC
H2-Aa	0.77	MP	miR-21 cKO TAC vs WT TAC
Fn1	-0.77	MP	miR-21 cKO TAC vs WT TAC
Klf2	-0.76	MP	miR-21 cKO TAC vs WT TAC
Rps27	-0.76	MP	miR-21 cKO TAC vs WT TAC
Rpl38	-0.74	MP	miR-21 cKO TAC vs WT TAC
Apoe	0.74	MP	miR-21 cKO TAC vs WT TAC
Ccl12	0.74	MP	miR-21 cKO TAC vs WT TAC
Btg1	-0.74	MP	miR-21 cKO TAC vs WT TAC
Eno1	-0.73	MP	miR-21 cKO TAC vs WT TAC
Ccl9	-0.71	MP	miR-21 cKO TAC vs WT TAC
Tsc22d3	-0.71	MP	miR-21 cKO TAC vs WT TAC
Ly6c2	-0.71	MP	miR-21 cKO TAC vs WT TAC
Cox17	-0.70	MP	miR-21 cKO TAC vs WT TAC
Pkm	-0.70	MP	miR-21 cKO TAC vs WT TAC
Slamf9	0.70	MP	miR-21 cKO TAC vs WT TAC
Ms4a7	0.69	MP	miR-21 cKO TAC vs WT TAC
H2-Ab1	0.69	MP	miR-21 cKO TAC vs WT TAC
Pou2f2	0.69	MP	miR-21 cKO TAC vs WT TAC
Dnaja1	-0.68	MP	miR-21 cKO TAC vs WT TAC
Gm28438	-0.68	MP	miR-21 cKO TAC vs WT TAC
Hspa8	-0.67	MP	miR-21 cKO TAC vs WT TAC
Tgfbi	-0.67	MP	miR-21 cKO TAC vs WT TAC
Clec4d	-0.66	MP	miR-21 cKO TAC vs WT TAC
Sec61g	-0.66	MP	miR-21 cKO TAC vs WT TAC
Tmsb10	-0.66	MP	miR-21 cKO TAC vs WT TAC
Prdx6	-0.66	MP	miR-21 cKO TAC vs WT TAC
Clec4e	-0.66	MP	miR-21 cKO TAC vs WT TAC
Cd81	0.64	MP	miR-21 cKO TAC vs WT TAC
S100a10	-0.63	MP	miR-21 cKO TAC vs WT TAC
Ccnd1	0.63	MP	miR-21 cKO TAC vs WT TAC
Timp1	-0.63	MP	miR-21 cKO TAC vs WT TAC
Vim	-0.63	MP	miR-21 cKO TAC vs WT TAC
Cd74	0.62	MP	miR-21 cKO TAC vs WT TAC
C1qb	0.62	MP	miR-21 cKO TAC vs WT TAC
Nfil3	-0.61	MP	miR-21 cKO TAC vs WT TAC

AW112010	0.61	MP	miR-21 cKO TAC vs WT TAC
Usmg5	-0.61	MP	miR-21 cKO TAC vs WT TAC
Actb	-0.61	MP	miR-21 cKO TAC vs WT TAC
Fcgr4	0.61	MP	miR-21 cKO TAC vs WT TAC
Xbp1	-0.61	MP	miR-21 cKO TAC vs WT TAC
Hmox1	-0.61	MP	miR-21 cKO TAC vs WT TAC
Rps21	-0.61	MP	miR-21 cKO TAC vs WT TAC
Ccl4	0.61	MP	miR-21 cKO TAC vs WT TAC
Rpl37	-0.60	MP	miR-21 cKO TAC vs WT TAC
Mrpl52	-0.60	MP	miR-21 cKO TAC vs WT TAC
Hif1a	-0.60	MP	miR-21 cKO TAC vs WT TAC
Rpl37a	-0.60	MP	miR-21 cKO TAC vs WT TAC
Atp5k	-0.59	MP	miR-21 cKO TAC vs WT TAC
Slpi	-0.58	MP	miR-21 cKO TAC vs WT TAC
Dmkn	-0.58	MP	miR-21 cKO TAC vs WT TAC
Hp	-0.58	MP	miR-21 cKO TAC vs WT TAC
Rpl35	-0.57	MP	miR-21 cKO TAC vs WT TAC
Clec7a	-0.57	MP	miR-21 cKO TAC vs WT TAC
Gm4149	-0.55	MP	miR-21 cKO TAC vs WT TAC
Lair1	0.55	MP	miR-21 cKO TAC vs WT TAC
Mif	-0.55	MP	miR-21 cKO TAC vs WT TAC
Ckb	0.55	MP	miR-21 cKO TAC vs WT TAC
C1qc	0.55	MP	miR-21 cKO TAC vs WT TAC
Rpl39	-0.55	MP	miR-21 cKO TAC vs WT TAC
Gm34084	0.54	MP	miR-21 cKO TAC vs WT TAC
Rpl36	-0.54	MP	miR-21 cKO TAC vs WT TAC
Clec4n	-0.54	MP	miR-21 cKO TAC vs WT TAC
Ldha	-0.53	MP	miR-21 cKO TAC vs WT TAC
G530011O06Rik	0.53	MP	miR-21 cKO TAC vs WT TAC
Rps27rt	-0.53	MP	miR-21 cKO TAC vs WT TAC
Cytip	-0.53	MP	miR-21 cKO TAC vs WT TAC
Slc16a3	-0.52	MP	miR-21 cKO TAC vs WT TAC
Klf9	-0.52	MP	miR-21 cKO TAC vs WT TAC
Ass1	-0.51	MP	miR-21 cKO TAC vs WT TAC
Rpl41	-0.51	MP	miR-21 cKO TAC vs WT TAC
Ltb4r1	-0.51	MP	miR-21 cKO TAC vs WT TAC
C3ar1	0.50	MP	miR-21 cKO TAC vs WT TAC

Cox7c	-0.50	MP	miR-21 cKO TAC vs WT TAC
Ifitm1	-0.50	MP	miR-21 cKO TAC vs WT TAC
Il1rn	-0.50	MP	miR-21 cKO TAC vs WT TAC
Lyz1	0.50	MP	miR-21 cKO TAC vs WT TAC
Msr1	-0.50	MP	miR-21 cKO TAC vs WT TAC
Nppa	0.49	MP	miR-21 cKO TAC vs WT TAC
Tgm2	-0.49	MP	miR-21 cKO TAC vs WT TAC
Socs3	-0.49	MP	miR-21 cKO TAC vs WT TAC
Emilin2	-0.49	MP	miR-21 cKO TAC vs WT TAC
Stmn1	0.48	MP	miR-21 cKO TAC vs WT TAC
Kdm6b	-0.48	MP	miR-21 cKO TAC vs WT TAC
Pgk1	-0.48	MP	miR-21 cKO TAC vs WT TAC
Atp5e	-0.48	MP	miR-21 cKO TAC vs WT TAC
Clec4a1	0.48	MP	miR-21 cKO TAC vs WT TAC
H2-Q7	0.48	MP	miR-21 cKO TAC vs WT TAC
C1qa	0.47	MP	miR-21 cKO TAC vs WT TAC
Cstb	-0.47	MP	miR-21 cKO TAC vs WT TAC
Mgl2	0.47	MP	miR-21 cKO TAC vs WT TAC
Capg	-0.47	MP	miR-21 cKO TAC vs WT TAC
Cxcl16	0.47	MP	miR-21 cKO TAC vs WT TAC
Emb	-0.47	MP	miR-21 cKO TAC vs WT TAC
Nfkbiz	0.47	MP	miR-21 cKO TAC vs WT TAC
F10	-0.47	MP	miR-21 cKO TAC vs WT TAC
Fkbp5	-0.46	MP	miR-21 cKO TAC vs WT TAC
Ccl3	0.46	MP	miR-21 cKO TAC vs WT TAC
Tomm7	-0.46	MP	miR-21 cKO TAC vs WT TAC
Uck2	-0.46	MP	miR-21 cKO TAC vs WT TAC
Rps26	-0.45	MP	miR-21 cKO TAC vs WT TAC
Zmynd15	0.45	MP	miR-21 cKO TAC vs WT TAC
Pim1	-0.45	MP	miR-21 cKO TAC vs WT TAC
Ddit4	-0.45	MP	miR-21 cKO TAC vs WT TAC
Jun	0.45	MP	miR-21 cKO TAC vs WT TAC
Msrb1	-0.45	MP	miR-21 cKO TAC vs WT TAC
Crip1	-0.45	MP	miR-21 cKO TAC vs WT TAC
Mcemp1	-0.45	MP	miR-21 cKO TAC vs WT TAC
Samsn1	-0.45	MP	miR-21 cKO TAC vs WT TAC
Marcks	0.45	MP	miR-21 cKO TAC vs WT TAC

Marcksl1	0.45	MP	miR-21 cKO TAC vs WT TAC
Adam8	-0.44	MP	miR-21 cKO TAC vs WT TAC
Stk17b	-0.44	MP	miR-21 cKO TAC vs WT TAC
Ccnd3	-0.44	MP	miR-21 cKO TAC vs WT TAC
Adgre1	0.44	MP	miR-21 cKO TAC vs WT TAC
Fosl2	-0.44	MP	miR-21 cKO TAC vs WT TAC
Slc39a1	-0.44	MP	miR-21 cKO TAC vs WT TAC
Lgals3	-0.44	MP	miR-21 cKO TAC vs WT TAC
Ndufa3	-0.43	MP	miR-21 cKO TAC vs WT TAC
2010107E04Rik	-0.43	MP	miR-21 cKO TAC vs WT TAC
Tmem176a	0.43	MP	miR-21 cKO TAC vs WT TAC
Bcl2a1d	-0.43	MP	miR-21 cKO TAC vs WT TAC
Trem1	-0.43	MP	miR-21 cKO TAC vs WT TAC
Nfkbia	-0.43	MP	miR-21 cKO TAC vs WT TAC
Gm1821	-0.43	MP	miR-21 cKO TAC vs WT TAC
Rpl37rt	-0.43	MP	miR-21 cKO TAC vs WT TAC
Ptpn1	-0.43	MP	miR-21 cKO TAC vs WT TAC
Ankrd1	-0.43	MP	miR-21 cKO TAC vs WT TAC
Napsa	-0.43	MP	miR-21 cKO TAC vs WT TAC
Cops9	-0.42	MP	miR-21 cKO TAC vs WT TAC
Kdr	0.42	MP	miR-21 cKO TAC vs WT TAC
mt-Nd1	0.42	MP	miR-21 cKO TAC vs WT TAC
Fosb	0.42	MP	miR-21 cKO TAC vs WT TAC
Fabp4	0.42	MP	miR-21 cKO TAC vs WT TAC
Cd93	0.41	MP	miR-21 cKO TAC vs WT TAC
Ch25h	0.41	MP	miR-21 cKO TAC vs WT TAC
Tmem258	-0.41	MP	miR-21 cKO TAC vs WT TAC
Snrpg	-0.41	MP	miR-21 cKO TAC vs WT TAC
mt-Atp6	0.41	MP	miR-21 cKO TAC vs WT TAC
Pgam1	-0.41	MP	miR-21 cKO TAC vs WT TAC
Irf8	0.40	MP	miR-21 cKO TAC vs WT TAC
Aldoa	-0.40	MP	miR-21 cKO TAC vs WT TAC
H1f0	0.40	MP	miR-21 cKO TAC vs WT TAC
Sem1	-0.40	MP	miR-21 cKO TAC vs WT TAC
Itm2b	0.40	MP	miR-21 cKO TAC vs WT TAC
Bst2	0.40	MP	miR-21 cKO TAC vs WT TAC
Lamp1	-0.39	MP	miR-21 cKO TAC vs WT TAC

Tmem176b	0.39	MP	miR-21 cKO TAC vs WT TAC
Lhfpl4	-0.39	MP	miR-21 cKO TAC vs WT TAC
AA467197	-0.39	MP	miR-21 cKO TAC vs WT TAC
Cdk2ap2	-0.39	MP	miR-21 cKO TAC vs WT TAC
mt-Cytb	0.39	MP	miR-21 cKO TAC vs WT TAC
Csrnp1	-0.39	MP	miR-21 cKO TAC vs WT TAC
Sdc4	-0.39	MP	miR-21 cKO TAC vs WT TAC
Lacc1	0.39	MP	miR-21 cKO TAC vs WT TAC
Aif1	0.39	MP	miR-21 cKO TAC vs WT TAC
Gatm	0.39	MP	miR-21 cKO TAC vs WT TAC
Fabp5	-0.39	MP	miR-21 cKO TAC vs WT TAC
Sirpb1c	-0.38	MP	miR-21 cKO TAC vs WT TAC
Hspa1a	0.38	MP	miR-21 cKO TAC vs WT TAC
Ccl2	-0.38	MP	miR-21 cKO TAC vs WT TAC
Acta1	-0.38	MP	miR-21 cKO TAC vs WT TAC
Ighm	0.38	MP	miR-21 cKO TAC vs WT TAC
Ms4a6d	-0.38	MP	miR-21 cKO TAC vs WT TAC
Fyb	0.37	MP	miR-21 cKO TAC vs WT TAC
Uqcr11	-0.37	MP	miR-21 cKO TAC vs WT TAC
Fam49b	-0.37	MP	miR-21 cKO TAC vs WT TAC
Pde4b	-0.37	MP	miR-21 cKO TAC vs WT TAC
Psmb9	0.37	MP	miR-21 cKO TAC vs WT TAC
Actg1	-0.37	MP	miR-21 cKO TAC vs WT TAC
Ly6a	0.37	MP	miR-21 cKO TAC vs WT TAC
Fxyd5	-0.37	MP	miR-21 cKO TAC vs WT TAC
Rpl34	-0.37	MP	miR-21 cKO TAC vs WT TAC
Crem	-0.37	MP	miR-21 cKO TAC vs WT TAC
Mmp19	-0.37	MP	miR-21 cKO TAC vs WT TAC
Gm42418	-0.37	MP	miR-21 cKO TAC vs WT TAC
Evi2a	0.37	MP	miR-21 cKO TAC vs WT TAC
Slfn2	-0.36	MP	miR-21 cKO TAC vs WT TAC
Cebpb	-0.36	MP	miR-21 cKO TAC vs WT TAC
Ccl8	1.94	M2-like MP	WT TAC vs WT Sham
Spp1	1.83	M2-like MP	WT TAC vs WT Sham
Myl3	-1.83	M2-like MP	WT TAC vs WT Sham
Mt2	1.61	M2-like MP	WT TAC vs WT Sham
Mb	-1.56	M2-like MP	WT TAC vs WT Sham

Cox6a2	-1.50	M2-like MP	WT TAC vs WT Sham
Atp2a2	-1.45	M2-like MP	WT TAC vs WT Sham
Ccl12	1.43	M2-like MP	WT TAC vs WT Sham
Pln	-1.41	M2-like MP	WT TAC vs WT Sham
Lgals3	1.41	M2-like MP	WT TAC vs WT Sham
mt-Atp6	-1.30	M2-like MP	WT TAC vs WT Sham
Actc1	-1.28	M2-like MP	WT TAC vs WT Sham
Cd36	-1.27	M2-like MP	WT TAC vs WT Sham
Igfbp7	1.26	M2-like MP	WT TAC vs WT Sham
Fabp3	-1.21	M2-like MP	WT TAC vs WT Sham
Gm28438	1.17	M2-like MP	WT TAC vs WT Sham
Cxcl2	1.17	M2-like MP	WT TAC vs WT Sham
Ccl7	1.16	M2-like MP	WT TAC vs WT Sham
Ccl2	1.15	M2-like MP	WT TAC vs WT Sham
Ckm	-1.15	M2-like MP	WT TAC vs WT Sham
Slc25a4	-1.13	M2-like MP	WT TAC vs WT Sham
Cox7a1	-1.12	M2-like MP	WT TAC vs WT Sham
Hmox1	1.10	M2-like MP	WT TAC vs WT Sham
Ctsd	1.10	M2-like MP	WT TAC vs WT Sham
Cox8b	-1.09	M2-like MP	WT TAC vs WT Sham
Dnaja1	1.06	M2-like MP	WT TAC vs WT Sham
Ckmt2	-1.05	M2-like MP	WT TAC vs WT Sham
Hspa5	1.05	M2-like MP	WT TAC vs WT Sham
Hspa8	1.04	M2-like MP	WT TAC vs WT Sham
Hexb	1.04	M2-like MP	WT TAC vs WT Sham
Ctss	1.04	M2-like MP	WT TAC vs WT Sham
Chchd10	-1.03	M2-like MP	WT TAC vs WT Sham
Marcks	-1.03	M2-like MP	WT TAC vs WT Sham
mt-Co2	-1.01	M2-like MP	WT TAC vs WT Sham
Mybpc3	-0.99	M2-like MP	WT TAC vs WT Sham
Timp1	0.98	M2-like MP	WT TAC vs WT Sham
mt-Co3	-0.97	M2-like MP	WT TAC vs WT Sham
Ifi30	0.97	M2-like MP	WT TAC vs WT Sham
Ftl1-ps1	-0.95	M2-like MP	WT TAC vs WT Sham
Tnnc1	-0.95	M2-like MP	WT TAC vs WT Sham
Wfdc17	-0.95	M2-like MP	WT TAC vs WT Sham
Lpl	-0.95	M2-like MP	WT TAC vs WT Sham

Ccl24	-0.94	M2-like MP	WT TAC vs WT Sham
Fn1	0.93	M2-like MP	WT TAC vs WT Sham
Ldhb	-0.91	M2-like MP	WT TAC vs WT Sham
Eif4a1	0.88	M2-like MP	WT TAC vs WT Sham
Fcrls	0.87	M2-like MP	WT TAC vs WT Sham
Capg	0.87	M2-like MP	WT TAC vs WT Sham
Ms4a6d	0.87	M2-like MP	WT TAC vs WT Sham
Hrc	-0.86	M2-like MP	WT TAC vs WT Sham
Hsp90aa1	0.86	M2-like MP	WT TAC vs WT Sham
Il1b	0.85	M2-like MP	WT TAC vs WT Sham
mt-Rnr1	0.84	M2-like MP	WT TAC vs WT Sham
Zfp36l1	-0.84	M2-like MP	WT TAC vs WT Sham
Clec4n	0.83	M2-like MP	WT TAC vs WT Sham
Lgmn	0.83	M2-like MP	WT TAC vs WT Sham
Tcap	-0.83	M2-like MP	WT TAC vs WT Sham
Cd14	0.83	M2-like MP	WT TAC vs WT Sham
Mt1	0.82	M2-like MP	WT TAC vs WT Sham
Ccl4	0.82	M2-like MP	WT TAC vs WT Sham
Ctsb	0.82	M2-like MP	WT TAC vs WT Sham
Crip2	-0.81	M2-like MP	WT TAC vs WT Sham
Fxyd5	0.81	M2-like MP	WT TAC vs WT Sham
Eno3	-0.80	M2-like MP	WT TAC vs WT Sham
Nfkbia	0.80	M2-like MP	WT TAC vs WT Sham
Ctsz	0.80	M2-like MP	WT TAC vs WT Sham
Plin2	0.80	M2-like MP	WT TAC vs WT Sham
Rps27rt	-0.80	M2-like MP	WT TAC vs WT Sham
Ccr2	0.79	M2-like MP	WT TAC vs WT Sham
Cdkn1a	0.79	M2-like MP	WT TAC vs WT Sham
Socs3	0.79	M2-like MP	WT TAC vs WT Sham
Trem2	0.79	M2-like MP	WT TAC vs WT Sham
H2-K1	0.78	M2-like MP	WT TAC vs WT Sham
Cd52	0.78	M2-like MP	WT TAC vs WT Sham
Chil3	0.77	M2-like MP	WT TAC vs WT Sham
H2-D1	0.77	M2-like MP	WT TAC vs WT Sham
Vim	0.77	M2-like MP	WT TAC vs WT Sham
F630028O10Rik	-0.77	M2-like MP	WT TAC vs WT Sham
Zbtb20	-0.77	M2-like MP	WT TAC vs WT Sham

Rpl10-ps3	-0.77	M2-like MP	WT TAC vs WT Sham
Fcgr3	0.77	M2-like MP	WT TAC vs WT Sham
Kdr	-0.75	M2-like MP	WT TAC vs WT Sham
Srgn	0.75	M2-like MP	WT TAC vs WT Sham
Eno1	0.74	M2-like MP	WT TAC vs WT Sham
Gm10076	0.73	M2-like MP	WT TAC vs WT Sham
Bcl2a1b	0.73	M2-like MP	WT TAC vs WT Sham
Ms4a7	0.73	M2-like MP	WT TAC vs WT Sham
Gm11808	-0.72	M2-like MP	WT TAC vs WT Sham
Ctsl	0.72	M2-like MP	WT TAC vs WT Sham
Cd68	0.72	M2-like MP	WT TAC vs WT Sham
Zeb2	-0.72	M2-like MP	WT TAC vs WT Sham
Actg1	0.72	M2-like MP	WT TAC vs WT Sham
Pkm	0.71	M2-like MP	WT TAC vs WT Sham
Cltc	-0.71	M2-like MP	WT TAC vs WT Sham
Anxa2	0.71	M2-like MP	WT TAC vs WT Sham
Sptbn1	-0.70	M2-like MP	WT TAC vs WT Sham
Maf	-0.70	M2-like MP	WT TAC vs WT Sham
S100a11	0.69	M2-like MP	WT TAC vs WT Sham
Tspo	0.69	M2-like MP	WT TAC vs WT Sham
Uqcr11	-0.69	M2-like MP	WT TAC vs WT Sham
Ckb	0.69	M2-like MP	WT TAC vs WT Sham
Hspa1a	0.69	M2-like MP	WT TAC vs WT Sham
Ccl6	-0.68	M2-like MP	WT TAC vs WT Sham
mt-Rnr2	0.68	M2-like MP	WT TAC vs WT Sham
Mdh1	-0.67	M2-like MP	WT TAC vs WT Sham
Irf2bp2	-0.67	M2-like MP	WT TAC vs WT Sham
Des	-0.67	M2-like MP	WT TAC vs WT Sham
Qk	-0.67	M2-like MP	WT TAC vs WT Sham
Grn	0.67	M2-like MP	WT TAC vs WT Sham
Fcgr1	0.66	M2-like MP	WT TAC vs WT Sham
Wdr89	-0.65	M2-like MP	WT TAC vs WT Sham
BC005537	-0.65	M2-like MP	WT TAC vs WT Sham
Ndufa5	-0.65	M2-like MP	WT TAC vs WT Sham
Rps2-ps10	-0.65	M2-like MP	WT TAC vs WT Sham
Il4ra	0.64	M2-like MP	WT TAC vs WT Sham
Ryr2	-0.64	M2-like MP	WT TAC vs WT Sham

Pgam2	-0.64	M2-like MP	WT TAC vs WT Sham
Cebpd	0.63	M2-like MP	WT TAC vs WT Sham
Cd72	0.63	M2-like MP	WT TAC vs WT Sham
Fhl2	-0.63	M2-like MP	WT TAC vs WT Sham
Etfb	-0.63	M2-like MP	WT TAC vs WT Sham
Msr1	0.63	M2-like MP	WT TAC vs WT Sham
Fxyd2	-0.63	M2-like MP	WT TAC vs WT Sham
Metrnl	0.62	M2-like MP	WT TAC vs WT Sham
Ptpn1	0.62	M2-like MP	WT TAC vs WT Sham
Ctsa	0.62	M2-like MP	WT TAC vs WT Sham
Manf	0.62	M2-like MP	WT TAC vs WT Sham
Tgfbi	0.62	M2-like MP	WT TAC vs WT Sham
Eif5a	0.62	M2-like MP	WT TAC vs WT Sham
Obscn	-0.61	M2-like MP	WT TAC vs WT Sham
Zfp36l2	-0.61	M2-like MP	WT TAC vs WT Sham
Adrb2	-0.61	M2-like MP	WT TAC vs WT Sham
Lilr4b	0.61	M2-like MP	WT TAC vs WT Sham
Ndufa13	-0.61	M2-like MP	WT TAC vs WT Sham
Fth1	0.60	M2-like MP	WT TAC vs WT Sham
Ndrg2	-0.60	M2-like MP	WT TAC vs WT Sham
Trdn	-0.60	M2-like MP	WT TAC vs WT Sham
Thbs1	0.60	M2-like MP	WT TAC vs WT Sham
Rpl37rt	-0.60	M2-like MP	WT TAC vs WT Sham
Efhd2	0.60	M2-like MP	WT TAC vs WT Sham
Raph1	-0.59	M2-like MP	WT TAC vs WT Sham
Map1lc3a	-0.59	M2-like MP	WT TAC vs WT Sham
Plaur	0.59	M2-like MP	WT TAC vs WT Sham
Dpysl2	-0.59	M2-like MP	WT TAC vs WT Sham
Slc3a2	0.59	M2-like MP	WT TAC vs WT Sham
Cavin2	-0.59	M2-like MP	WT TAC vs WT Sham
Cd9	0.59	M2-like MP	WT TAC vs WT Sham
Pdia3	0.59	M2-like MP	WT TAC vs WT Sham
Grcc10	-0.59	M2-like MP	WT TAC vs WT Sham
Cct5	0.59	M2-like MP	WT TAC vs WT Sham
Cox6c	-0.58	M2-like MP	WT TAC vs WT Sham
Ncl	0.58	M2-like MP	WT TAC vs WT Sham
Ndufv3	-0.58	M2-like MP	WT TAC vs WT Sham

B2m	0.58	M2-like MP	WT TAC vs WT Sham
Tmcc1	-0.58	M2-like MP	WT TAC vs WT Sham
Atp5l	-0.58	M2-like MP	WT TAC vs WT Sham
Ltc4s	-0.57	M2-like MP	WT TAC vs WT Sham
Tuba4a	-0.57	M2-like MP	WT TAC vs WT Sham
Ndufb9	-0.57	M2-like MP	WT TAC vs WT Sham
Cct8	0.57	M2-like MP	WT TAC vs WT Sham
Cryab	-0.57	M2-like MP	WT TAC vs WT Sham
Fcgr2b	0.57	M2-like MP	WT TAC vs WT Sham
Actn2	-0.57	M2-like MP	WT TAC vs WT Sham
Cct7	0.57	M2-like MP	WT TAC vs WT Sham
Atp5g1	-0.57	M2-like MP	WT TAC vs WT Sham
Ecm1	0.57	M2-like MP	WT TAC vs WT Sham
Tcf4	-0.57	M2-like MP	WT TAC vs WT Sham
Cstb	0.56	M2-like MP	WT TAC vs WT Sham
Mpeg1	0.56	M2-like MP	WT TAC vs WT Sham
Myom1	-0.56	M2-like MP	WT TAC vs WT Sham
Cdh5	-0.56	M2-like MP	WT TAC vs WT Sham
Bax	0.56	M2-like MP	WT TAC vs WT Sham
Hsp90ab1	0.56	M2-like MP	WT TAC vs WT Sham
Hbb-bs	-0.55	M2-like MP	WT TAC vs WT Sham
Ech1	-0.55	M2-like MP	WT TAC vs WT Sham
Atp1a2	-0.55	M2-like MP	WT TAC vs WT Sham
Uqcr10	-0.55	M2-like MP	WT TAC vs WT Sham
Rgs1	0.55	M2-like MP	WT TAC vs WT Sham
Cd164	-0.55	M2-like MP	WT TAC vs WT Sham
Crip1	-0.55	M2-like MP	WT TAC vs WT Sham
Atp5g3	-0.54	M2-like MP	WT TAC vs WT Sham
Ctsh	0.54	M2-like MP	WT TAC vs WT Sham
Ndufb4	-0.54	M2-like MP	WT TAC vs WT Sham
Serf2	-0.54	M2-like MP	WT TAC vs WT Sham
Hadhb	-0.54	M2-like MP	WT TAC vs WT Sham
Tubb6	0.54	M2-like MP	WT TAC vs WT Sham
Hexa	0.54	M2-like MP	WT TAC vs WT Sham
Clic1	0.54	M2-like MP	WT TAC vs WT Sham
Rpn2	0.54	M2-like MP	WT TAC vs WT Sham
Mtss1	-0.54	M2-like MP	WT TAC vs WT Sham

Cct6a	0.53	M2-like MP	WT TAC vs WT Sham
Pdia6	0.53	M2-like MP	WT TAC vs WT Sham
Cd63	0.53	M2-like MP	WT TAC vs WT Sham
Myadm	-0.53	M2-like MP	WT TAC vs WT Sham
Akr1a1	0.53	M2-like MP	WT TAC vs WT Sham
S100a4	0.53	M2-like MP	WT TAC vs WT Sham
Acta1	0.53	M2-like MP	WT TAC vs WT Sham
Gm4604	-0.53	M2-like MP	WT TAC vs WT Sham
Bloc1s1	-0.53	M2-like MP	WT TAC vs WT Sham
Nfib	-0.52	M2-like MP	WT TAC vs WT Sham
Mt2	-1.44	M2-like MP	miR-21 cKO TAC vs WT TAC
H2-Aa	1.21	M2-like MP	miR-21 cKO TAC vs WT TAC
H2-Eb1	1.20	M2-like MP	miR-21 cKO TAC vs WT TAC
Mt1	-1.12	M2-like MP	miR-21 cKO TAC vs WT TAC
H2-Ab1	1.05	M2-like MP	miR-21 cKO TAC vs WT TAC
Cd74	0.99	M2-like MP	miR-21 cKO TAC vs WT TAC
Rps28	-0.98	M2-like MP	miR-21 cKO TAC vs WT TAC
Klf2	-0.96	M2-like MP	miR-21 cKO TAC vs WT TAC
Igfbp7	-0.93	M2-like MP	miR-21 cKO TAC vs WT TAC
Hmox1	-0.90	M2-like MP	miR-21 cKO TAC vs WT TAC
Rps29	-0.87	M2-like MP	miR-21 cKO TAC vs WT TAC
Tsc22d3	-0.87	M2-like MP	miR-21 cKO TAC vs WT TAC
S100a4	-0.81	M2-like MP	miR-21 cKO TAC vs WT TAC
S100a6	-0.81	M2-like MP	miR-21 cKO TAC vs WT TAC
Gm10076	-0.78	M2-like MP	miR-21 cKO TAC vs WT TAC
Rpl38	-0.78	M2-like MP	miR-21 cKO TAC vs WT TAC
Spp1	-0.77	M2-like MP	miR-21 cKO TAC vs WT TAC
Gm28438	-0.72	M2-like MP	miR-21 cKO TAC vs WT TAC
Chil3	-0.70	M2-like MP	miR-21 cKO TAC vs WT TAC
Rps27	-0.67	M2-like MP	miR-21 cKO TAC vs WT TAC
AC121965.1	-0.67	M2-like MP	miR-21 cKO TAC vs WT TAC
Dnaja1	-0.67	M2-like MP	miR-21 cKO TAC vs WT TAC
Cd72	0.67	M2-like MP	miR-21 cKO TAC vs WT TAC
Rpl37	-0.64	M2-like MP	miR-21 cKO TAC vs WT TAC
Fcgr4	0.64	M2-like MP	miR-21 cKO TAC vs WT TAC
Rpl35	-0.64	M2-like MP	miR-21 cKO TAC vs WT TAC
Klf9	-0.63	M2-like MP	miR-21 cKO TAC vs WT TAC

Rps21	-0.63	M2-like MP	miR-21 cKO TAC vs WT TAC
Atp5k	-0.62	M2-like MP	miR-21 cKO TAC vs WT TAC
Rpl37a	-0.62	M2-like MP	miR-21 cKO TAC vs WT TAC
Slc39a1	-0.61	M2-like MP	miR-21 cKO TAC vs WT TAC
Usmg5	-0.61	M2-like MP	miR-21 cKO TAC vs WT TAC
Actb	-0.60	M2-like MP	miR-21 cKO TAC vs WT TAC
Rpl36	-0.60	M2-like MP	miR-21 cKO TAC vs WT TAC
Ccl4	0.60	M2-like MP	miR-21 cKO TAC vs WT TAC
Rpl39	-0.59	M2-like MP	miR-21 cKO TAC vs WT TAC
Pou2f2	0.59	M2-like MP	miR-21 cKO TAC vs WT TAC
Hspa8	-0.58	M2-like MP	miR-21 cKO TAC vs WT TAC
Ccl12	0.58	M2-like MP	miR-21 cKO TAC vs WT TAC
Gm4149	-0.57	M2-like MP	miR-21 cKO TAC vs WT TAC
Timp1	-0.57	M2-like MP	miR-21 cKO TAC vs WT TAC
Ddit4	-0.56	M2-like MP	miR-21 cKO TAC vs WT TAC
Sec61g	-0.55	M2-like MP	miR-21 cKO TAC vs WT TAC
Rpl41	-0.55	M2-like MP	miR-21 cKO TAC vs WT TAC
Stk17b	-0.55	M2-like MP	miR-21 cKO TAC vs WT TAC
Cox7c	-0.54	M2-like MP	miR-21 cKO TAC vs WT TAC
Rps26	-0.53	M2-like MP	miR-21 cKO TAC vs WT TAC
Plaur	-0.53	M2-like MP	miR-21 cKO TAC vs WT TAC
G530011O06Rik	0.53	M2-like MP	miR-21 cKO TAC vs WT TAC
Thbs1	-0.53	M2-like MP	miR-21 cKO TAC vs WT TAC
Timp2	-0.53	M2-like MP	miR-21 cKO TAC vs WT TAC
Nppa	0.53	M2-like MP	miR-21 cKO TAC vs WT TAC
Ccl3	0.52	M2-like MP	miR-21 cKO TAC vs WT TAC
Slamf9	0.52	M2-like MP	miR-21 cKO TAC vs WT TAC
Marcksl1	0.52	M2-like MP	miR-21 cKO TAC vs WT TAC
S100a11	-0.51	M2-like MP	miR-21 cKO TAC vs WT TAC
C3ar1	0.50	M2-like MP	miR-21 cKO TAC vs WT TAC
Anxa2	-0.50	M2-like MP	miR-21 cKO TAC vs WT TAC
Tomm7	-0.49	M2-like MP	miR-21 cKO TAC vs WT TAC
Cox17	-0.49	M2-like MP	miR-21 cKO TAC vs WT TAC
Lamp1	-0.49	M2-like MP	miR-21 cKO TAC vs WT TAC
Apoe	0.48	M2-like MP	miR-21 cKO TAC vs WT TAC
Clec4a1	0.48	M2-like MP	miR-21 cKO TAC vs WT TAC
Hes1	-0.48	M2-like MP	miR-21 cKO TAC vs WT TAC

Rps27rt	-0.48	M2-like MP	miR-21 cKO TAC vs WT TAC
8430408G22Rik	-0.48	M2-like MP	miR-21 cKO TAC vs WT TAC
Atp5e	-0.47	M2-like MP	miR-21 cKO TAC vs WT TAC
H2-DMa	0.47	M2-like MP	miR-21 cKO TAC vs WT TAC
Fkbp5	-0.46	M2-like MP	miR-21 cKO TAC vs WT TAC
Mrpl52	-0.46	M2-like MP	miR-21 cKO TAC vs WT TAC
Nfkbiz	0.46	M2-like MP	miR-21 cKO TAC vs WT TAC
H2-Q7	0.46	M2-like MP	miR-21 cKO TAC vs WT TAC
Gm1821	-0.46	M2-like MP	miR-21 cKO TAC vs WT TAC
Hspb1	-0.46	M2-like MP	miR-21 cKO TAC vs WT TAC
Rpl37rt	-0.45	M2-like MP	miR-21 cKO TAC vs WT TAC
Ankrd1	-0.45	M2-like MP	miR-21 cKO TAC vs WT TAC
Hbb-bs	0.45	M2-like MP	miR-21 cKO TAC vs WT TAC
Ccnd1	0.45	M2-like MP	miR-21 cKO TAC vs WT TAC
Ms4a7	0.45	M2-like MP	miR-21 cKO TAC vs WT TAC
Lair1	0.45	M2-like MP	miR-21 cKO TAC vs WT TAC
Stmn1	0.44	M2-like MP	miR-21 cKO TAC vs WT TAC
AW112010	0.44	M2-like MP	miR-21 cKO TAC vs WT TAC
Tmem176a	0.44	M2-like MP	miR-21 cKO TAC vs WT TAC
Fn1	-0.44	M2-like MP	miR-21 cKO TAC vs WT TAC
Ndufa3	-0.44	M2-like MP	miR-21 cKO TAC vs WT TAC
Lgals3	-0.44	M2-like MP	miR-21 cKO TAC vs WT TAC
Snrpg	-0.44	M2-like MP	miR-21 cKO TAC vs WT TAC
Ccl8	-0.43	M2-like MP	miR-21 cKO TAC vs WT TAC
Cebpd	-0.43	M2-like MP	miR-21 cKO TAC vs WT TAC
2010107E04Rik	-0.43	M2-like MP	miR-21 cKO TAC vs WT TAC
Marcks	0.42	M2-like MP	miR-21 cKO TAC vs WT TAC
Eno1	-0.42	M2-like MP	miR-21 cKO TAC vs WT TAC
Jund	-0.42	M2-like MP	miR-21 cKO TAC vs WT TAC
Acta1	-0.42	M2-like MP	miR-21 cKO TAC vs WT TAC
Uqcr11	-0.41	M2-like MP	miR-21 cKO TAC vs WT TAC
Kdr	0.41	M2-like MP	miR-21 cKO TAC vs WT TAC
Lrrc8a	-0.41	M2-like MP	miR-21 cKO TAC vs WT TAC
Cops9	-0.41	M2-like MP	miR-21 cKO TAC vs WT TAC
Per1	-0.41	M2-like MP	miR-21 cKO TAC vs WT TAC
Ccr5	0.40	M2-like MP	miR-21 cKO TAC vs WT TAC
H2-DMb1	0.40	M2-like MP	miR-21 cKO TAC vs WT TAC

Bola2	-0.40	M2-like MP	miR-21 cKO TAC vs WT TAC
Gm42418	-0.40	M2-like MP	miR-21 cKO TAC vs WT TAC
Zmynd15	0.40	M2-like MP	miR-21 cKO TAC vs WT TAC
Mif	-0.40	M2-like MP	miR-21 cKO TAC vs WT TAC
S100a10	-0.39	M2-like MP	miR-21 cKO TAC vs WT TAC
Jun	0.39	M2-like MP	miR-21 cKO TAC vs WT TAC
Capg	-0.38	M2-like MP	miR-21 cKO TAC vs WT TAC
Rpl34	-0.38	M2-like MP	miR-21 cKO TAC vs WT TAC
Tmem258	-0.38	M2-like MP	miR-21 cKO TAC vs WT TAC
Psmb8	0.38	M2-like MP	miR-21 cKO TAC vs WT TAC
Ccl9	-0.38	M2-like MP	miR-21 cKO TAC vs WT TAC
Cox7a1	-0.38	M2-like MP	miR-21 cKO TAC vs WT TAC
Crip1	-0.38	M2-like MP	miR-21 cKO TAC vs WT TAC
Hpgd	-0.38	M2-like MP	miR-21 cKO TAC vs WT TAC
H1f0	0.37	M2-like MP	miR-21 cKO TAC vs WT TAC
Rgs2	0.37	M2-like MP	miR-21 cKO TAC vs WT TAC
Fyb	0.37	M2-like MP	miR-21 cKO TAC vs WT TAC
Tmsb10	-0.37	M2-like MP	miR-21 cKO TAC vs WT TAC
Emp1	-0.37	M2-like MP	miR-21 cKO TAC vs WT TAC
Tmem176b	0.36	M2-like MP	miR-21 cKO TAC vs WT TAC
mt-Atp6	0.36	M2-like MP	miR-21 cKO TAC vs WT TAC
Abca1	-0.36	M2-like MP	miR-21 cKO TAC vs WT TAC
St13	-0.36	M2-like MP	miR-21 cKO TAC vs WT TAC
Cd93	0.36	M2-like MP	miR-21 cKO TAC vs WT TAC
Isg15	0.36	M2-like MP	miR-21 cKO TAC vs WT TAC
Evi2a	0.36	M2-like MP	miR-21 cKO TAC vs WT TAC
Gm34084	0.36	M2-like MP	miR-21 cKO TAC vs WT TAC
Uqcrq	-0.36	M2-like MP	miR-21 cKO TAC vs WT TAC
mt-Nd1	0.36	M2-like MP	miR-21 cKO TAC vs WT TAC
Pkm	-0.36	M2-like MP	miR-21 cKO TAC vs WT TAC
Rpl31	-0.35	M2-like MP	miR-21 cKO TAC vs WT TAC
Pclaf	0.35	M2-like MP	miR-21 cKO TAC vs WT TAC
Snrpf	-0.35	M2-like MP	miR-21 cKO TAC vs WT TAC
Gas5	-0.35	M2-like MP	miR-21 cKO TAC vs WT TAC
Fosb	0.35	M2-like MP	miR-21 cKO TAC vs WT TAC
Psmb9	0.35	M2-like MP	miR-21 cKO TAC vs WT TAC
Cxcl16	0.35	M2-like MP	miR-21 cKO TAC vs WT TAC

Srgn	-0.35	M2-like MP	miR-21 cKO TAC vs WT TAC
Akap12	-0.35	M2-like MP	miR-21 cKO TAC vs WT TAC
Cd81	0.34	M2-like MP	miR-21 cKO TAC vs WT TAC
Uba52	-0.34	M2-like MP	miR-21 cKO TAC vs WT TAC
Vim	-0.34	M2-like MP	miR-21 cKO TAC vs WT TAC
Ier5	0.34	M2-like MP	miR-21 cKO TAC vs WT TAC
Nupr1	-0.34	M2-like MP	miR-21 cKO TAC vs WT TAC
Phlda1	0.34	M2-like MP	miR-21 cKO TAC vs WT TAC
Ch25h	0.34	M2-like MP	miR-21 cKO TAC vs WT TAC
Msr1	-0.34	M2-like MP	miR-21 cKO TAC vs WT TAC
Zeb2	0.34	M2-like MP	miR-21 cKO TAC vs WT TAC
Tgfbi	-0.34	M2-like MP	miR-21 cKO TAC vs WT TAC
Cdk6	0.34	M2-like MP	miR-21 cKO TAC vs WT TAC
mt-Cytb	0.33	M2-like MP	miR-21 cKO TAC vs WT TAC
Aif1	0.33	M2-like MP	miR-21 cKO TAC vs WT TAC
Ccnd3	-0.33	M2-like MP	miR-21 cKO TAC vs WT TAC
Polr2l	-0.33	M2-like MP	miR-21 cKO TAC vs WT TAC
Eif2s2	-0.33	M2-like MP	miR-21 cKO TAC vs WT TAC
Nfkbia	-0.33	M2-like MP	miR-21 cKO TAC vs WT TAC
Ccr1	0.33	M2-like MP	miR-21 cKO TAC vs WT TAC
Cox6c	-0.33	M2-like MP	miR-21 cKO TAC vs WT TAC
Rpl36a	-0.33	M2-like MP	miR-21 cKO TAC vs WT TAC
Ndufc1	-0.33	M2-like MP	miR-21 cKO TAC vs WT TAC
Cox6a2	-0.33	M2-like MP	miR-21 cKO TAC vs WT TAC
Rpl35a	-0.33	M2-like MP	miR-21 cKO TAC vs WT TAC
Socs3	-0.33	M2-like MP	miR-21 cKO TAC vs WT TAC
Cybb	0.32	M2-like MP	miR-21 cKO TAC vs WT TAC
Cd163	-0.32	M2-like MP	miR-21 cKO TAC vs WT TAC
Nars	-0.32	M2-like MP	miR-21 cKO TAC vs WT TAC
9930111J21Rik2	0.32	M2-like MP	miR-21 cKO TAC vs WT TAC
Rpl27a	-0.32	M2-like MP	miR-21 cKO TAC vs WT TAC
Lgals1	-0.32	M2-like MP	miR-21 cKO TAC vs WT TAC
Osm	-0.32	M2-like MP	miR-21 cKO TAC vs WT TAC
Eif3j1	-0.32	M2-like MP	miR-21 cKO TAC vs WT TAC
Ier3	0.31	M2-like MP	miR-21 cKO TAC vs WT TAC
Rplp2	-0.31	M2-like MP	miR-21 cKO TAC vs WT TAC
Romo1	-0.31	M2-like MP	miR-21 cKO TAC vs WT TAC

Cox5b	-0.31	M2-like MP	miR-21 cKO TAC vs WT TAC
H2-Q6	0.31	M2-like MP	miR-21 cKO TAC vs WT TAC
Ifit3	0.31	M2-like MP	miR-21 cKO TAC vs WT TAC
Atp5j2	-0.31	M2-like MP	miR-21 cKO TAC vs WT TAC
Rpl30	-0.31	M2-like MP	miR-21 cKO TAC vs WT TAC
Gm2000	-0.30	M2-like MP	miR-21 cKO TAC vs WT TAC
Apbb1ip	0.30	M2-like MP	miR-21 cKO TAC vs WT TAC
Lacc1	0.30	M2-like MP	miR-21 cKO TAC vs WT TAC
Hspa5	-0.30	M2-like MP	miR-21 cKO TAC vs WT TAC
Irf8	0.30	M2-like MP	miR-21 cKO TAC vs WT TAC
Ednrb	-0.30	M2-like MP	miR-21 cKO TAC vs WT TAC
Hspe1	-0.30	M2-like MP	miR-21 cKO TAC vs WT TAC
Uqcr10	-0.30	M2-like MP	miR-21 cKO TAC vs WT TAC
Birc5	0.30	M2-like MP	miR-21 cKO TAC vs WT TAC
Wdr89	-0.30	M2-like MP	miR-21 cKO TAC vs WT TAC
Dusp3	-0.30	M2-like MP	miR-21 cKO TAC vs WT TAC
H2-K1	0.30	M2-like MP	miR-21 cKO TAC vs WT TAC
Nfil3	-0.30	M2-like MP	miR-21 cKO TAC vs WT TAC
Tap1	0.30	M2-like MP	miR-21 cKO TAC vs WT TAC
Cd52	0.30	M2-like MP	miR-21 cKO TAC vs WT TAC
Atp5l	-0.30	M2-like MP	miR-21 cKO TAC vs WT TAC
Lst1	0.30	M2-like MP	miR-21 cKO TAC vs WT TAC
Kdm6b	-0.29	M2-like MP	miR-21 cKO TAC vs WT TAC
Stap1	0.29	M2-like MP	miR-21 cKO TAC vs WT TAC
Ucp2	-0.29	M2-like MP	miR-21 cKO TAC vs WT TAC
Chil3	2.71	M1-like MP	WT TAC vs WT Sham
Spp1	2.56	M1-like MP	WT TAC vs WT Sham
Thbs1	2.18	M1-like MP	WT TAC vs WT Sham
Il1b	2.12	M1-like MP	WT TAC vs WT Sham
Apoe	-1.98	M1-like MP	WT TAC vs WT Sham
Srgn	1.92	M1-like MP	WT TAC vs WT Sham
Mb	-1.86	M1-like MP	WT TAC vs WT Sham
Cox6a2	-1.83	M1-like MP	WT TAC vs WT Sham
Pf4	-1.79	M1-like MP	WT TAC vs WT Sham
Ccl2	1.77	M1-like MP	WT TAC vs WT Sham
Arg1	1.75	M1-like MP	WT TAC vs WT Sham
Anxa2	1.74	M1-like MP	WT TAC vs WT Sham

Fn1	1.74	M1-like MP	WT TAC vs WT Sham
Hp	1.73	M1-like MP	WT TAC vs WT Sham
Mgl2	-1.69	M1-like MP	WT TAC vs WT Sham
Cd81	-1.67	M1-like MP	WT TAC vs WT Sham
Plaur	1.67	M1-like MP	WT TAC vs WT Sham
Actc1	-1.65	M1-like MP	WT TAC vs WT Sham
Clec4n	1.63	M1-like MP	WT TAC vs WT Sham
Tgfbi	1.62	M1-like MP	WT TAC vs WT Sham
Slc25a4	-1.61	M1-like MP	WT TAC vs WT Sham
Ttn	-1.61	M1-like MP	WT TAC vs WT Sham
Plac8	1.61	M1-like MP	WT TAC vs WT Sham
Ly6c2	1.57	M1-like MP	WT TAC vs WT Sham
Fabp3	-1.56	M1-like MP	WT TAC vs WT Sham
Pln	-1.55	M1-like MP	WT TAC vs WT Sham
Atp2a2	-1.54	M1-like MP	WT TAC vs WT Sham
S100a11	1.54	M1-like MP	WT TAC vs WT Sham
Ccl7	1.50	M1-like MP	WT TAC vs WT Sham
Lpl	-1.50	M1-like MP	WT TAC vs WT Sham
Ccr1	1.48	M1-like MP	WT TAC vs WT Sham
C1qc	-1.48	M1-like MP	WT TAC vs WT Sham
Cox7a1	-1.46	M1-like MP	WT TAC vs WT Sham
Ckm	-1.45	M1-like MP	WT TAC vs WT Sham
Vim	1.45	M1-like MP	WT TAC vs WT Sham
mt-Atp6	-1.45	M1-like MP	WT TAC vs WT Sham
Pkm	1.43	M1-like MP	WT TAC vs WT Sham
Cd36	-1.42	M1-like MP	WT TAC vs WT Sham
Ms4a6d	1.38	M1-like MP	WT TAC vs WT Sham
Cox8b	-1.36	M1-like MP	WT TAC vs WT Sham
Ms4a4c	1.34	M1-like MP	WT TAC vs WT Sham
Ier3	1.34	M1-like MP	WT TAC vs WT Sham
Eno1	1.33	M1-like MP	WT TAC vs WT Sham
Ccl9	1.33	M1-like MP	WT TAC vs WT Sham
Vcan	1.33	M1-like MP	WT TAC vs WT Sham
Lgals3	1.32	M1-like MP	WT TAC vs WT Sham
Hpgd	-1.30	M1-like MP	WT TAC vs WT Sham
Socs3	1.29	M1-like MP	WT TAC vs WT Sham
Clec4d	1.29	M1-like MP	WT TAC vs WT Sham

Actg1	1.28	M1-like MP	WT TAC vs WT Sham
Slpi	1.26	M1-like MP	WT TAC vs WT Sham
S100a10	1.26	M1-like MP	WT TAC vs WT Sham
Osm	1.25	M1-like MP	WT TAC vs WT Sham
Clec4e	1.24	M1-like MP	WT TAC vs WT Sham
Hspa5	1.23	M1-like MP	WT TAC vs WT Sham
Tnnc1	-1.23	M1-like MP	WT TAC vs WT Sham
Cstb	1.23	M1-like MP	WT TAC vs WT Sham
Ckmt2	-1.23	M1-like MP	WT TAC vs WT Sham
Prdx6	1.22	M1-like MP	WT TAC vs WT Sham
Chchd10	-1.21	M1-like MP	WT TAC vs WT Sham
Ldhb	-1.20	M1-like MP	WT TAC vs WT Sham
mt-Co3	-1.20	M1-like MP	WT TAC vs WT Sham
Timp1	1.20	M1-like MP	WT TAC vs WT Sham
Ptpn1	1.19	M1-like MP	WT TAC vs WT Sham
Selenop	-1.19	M1-like MP	WT TAC vs WT Sham
Btg1	1.19	M1-like MP	WT TAC vs WT Sham
Ldha	1.18	M1-like MP	WT TAC vs WT Sham
Cxcl2	1.18	M1-like MP	WT TAC vs WT Sham
S100a4	1.17	M1-like MP	WT TAC vs WT Sham
mt-Co2	-1.17	M1-like MP	WT TAC vs WT Sham
Maf	-1.17	M1-like MP	WT TAC vs WT Sham
C1qa	-1.17	M1-like MP	WT TAC vs WT Sham
C1qb	-1.15	M1-like MP	WT TAC vs WT Sham
Eno3	-1.15	M1-like MP	WT TAC vs WT Sham
Hspa8	1.13	M1-like MP	WT TAC vs WT Sham
Sirpb1c	1.12	M1-like MP	WT TAC vs WT Sham
Msrb1	1.12	M1-like MP	WT TAC vs WT Sham
Xbp1	1.11	M1-like MP	WT TAC vs WT Sham
Marcks	-1.11	M1-like MP	WT TAC vs WT Sham
Tcap	-1.09	M1-like MP	WT TAC vs WT Sham
Dnaja1	1.09	M1-like MP	WT TAC vs WT Sham
Mybpc3	-1.08	M1-like MP	WT TAC vs WT Sham
Gda	1.08	M1-like MP	WT TAC vs WT Sham
S100a6	1.07	M1-like MP	WT TAC vs WT Sham
Ifitm1	1.07	M1-like MP	WT TAC vs WT Sham
Serinc3	-1.07	M1-like MP	WT TAC vs WT Sham

Ifi30	1.07	M1-like MP	WT TAC vs WT Sham
Ndufa5	-1.06	M1-like MP	WT TAC vs WT Sham
Igfbp7	1.06	M1-like MP	WT TAC vs WT Sham
Slc16a3	1.05	M1-like MP	WT TAC vs WT Sham
Emilin2	1.04	M1-like MP	WT TAC vs WT Sham
Ltb4r1	1.03	M1-like MP	WT TAC vs WT Sham
Crip2	-1.03	M1-like MP	WT TAC vs WT Sham
Mdh1	-1.03	M1-like MP	WT TAC vs WT Sham
Idh2	-1.02	M1-like MP	WT TAC vs WT Sham
Capg	1.02	M1-like MP	WT TAC vs WT Sham
Emb	1.01	M1-like MP	WT TAC vs WT Sham
AA467197	1.00	M1-like MP	WT TAC vs WT Sham
H2-Eb1	-1.00	M1-like MP	WT TAC vs WT Sham
Taldo1	1.00	M1-like MP	WT TAC vs WT Sham
Ftl1-ps1	-1.00	M1-like MP	WT TAC vs WT Sham
Mt2	0.99	M1-like MP	WT TAC vs WT Sham
Ms4a6c	0.98	M1-like MP	WT TAC vs WT Sham
Etfb	-0.97	M1-like MP	WT TAC vs WT Sham
Dmkn	0.97	M1-like MP	WT TAC vs WT Sham
Mcemp1	0.97	M1-like MP	WT TAC vs WT Sham
Ass1	0.96	M1-like MP	WT TAC vs WT Sham
Pim1	0.96	M1-like MP	WT TAC vs WT Sham
Ech1	-0.95	M1-like MP	WT TAC vs WT Sham
Msr1	0.95	M1-like MP	WT TAC vs WT Sham
Cryab	-0.95	M1-like MP	WT TAC vs WT Sham
Tgm2	0.94	M1-like MP	WT TAC vs WT Sham
Nfil3	0.94	M1-like MP	WT TAC vs WT Sham
Zbtb20	-0.94	M1-like MP	WT TAC vs WT Sham
F10	0.93	M1-like MP	WT TAC vs WT Sham
Ifitm6	0.93	M1-like MP	WT TAC vs WT Sham
Mef2c	-0.93	M1-like MP	WT TAC vs WT Sham
Gm10076	0.92	M1-like MP	WT TAC vs WT Sham
Pgam1	0.92	M1-like MP	WT TAC vs WT Sham
Gm28438	0.92	M1-like MP	WT TAC vs WT Sham
Itgb2	0.91	M1-like MP	WT TAC vs WT Sham
Mif	0.91	M1-like MP	WT TAC vs WT Sham
Hif1a	0.91	M1-like MP	WT TAC vs WT Sham

Clec4b1	-0.91	M1-like MP	WT TAC vs WT Sham
Zfp36l1	-0.90	M1-like MP	WT TAC vs WT Sham
Tspo	0.89	M1-like MP	WT TAC vs WT Sham
Fabp5	0.89	M1-like MP	WT TAC vs WT Sham
Plek	0.88	M1-like MP	WT TAC vs WT Sham
Ctsl	0.87	M1-like MP	WT TAC vs WT Sham
Dpysl2	-0.87	M1-like MP	WT TAC vs WT Sham
Aprt	0.87	M1-like MP	WT TAC vs WT Sham
Cx3cr1	-0.87	M1-like MP	WT TAC vs WT Sham
Bcl2a1d	0.86	M1-like MP	WT TAC vs WT Sham
Napsa	0.86	M1-like MP	WT TAC vs WT Sham
Hrc	-0.86	M1-like MP	WT TAC vs WT Sham
Pglyrp1	0.85	M1-like MP	WT TAC vs WT Sham
Eif4a1	0.85	M1-like MP	WT TAC vs WT Sham
Fcgr2b	0.85	M1-like MP	WT TAC vs WT Sham
Sptbn1	-0.85	M1-like MP	WT TAC vs WT Sham
Anxa1	0.84	M1-like MP	WT TAC vs WT Sham
Itgam	0.84	M1-like MP	WT TAC vs WT Sham
Myom1	-0.84	M1-like MP	WT TAC vs WT Sham
Tpi1	0.83	M1-like MP	WT TAC vs WT Sham
Cd14	0.83	M1-like MP	WT TAC vs WT Sham
Slfn2	0.82	M1-like MP	WT TAC vs WT Sham
Cd74	-0.82	M1-like MP	WT TAC vs WT Sham
Arpc1b	0.81	M1-like MP	WT TAC vs WT Sham
Tmsb10	0.81	M1-like MP	WT TAC vs WT Sham
Isg15	0.81	M1-like MP	WT TAC vs WT Sham
Bin2	0.81	M1-like MP	WT TAC vs WT Sham
Cbr2	-0.81	M1-like MP	WT TAC vs WT Sham
Slamf9	-0.81	M1-like MP	WT TAC vs WT Sham
Serp1	0.80	M1-like MP	WT TAC vs WT Sham
Fam49b	0.80	M1-like MP	WT TAC vs WT Sham
Fcgr1	0.80	M1-like MP	WT TAC vs WT Sham
Fxyd1	-0.80	M1-like MP	WT TAC vs WT Sham
Ly6e	0.80	M1-like MP	WT TAC vs WT Sham
Ninj1	0.80	M1-like MP	WT TAC vs WT Sham
Kctd12	-0.80	M1-like MP	WT TAC vs WT Sham
Slfn1	0.79	M1-like MP	WT TAC vs WT Sham

Eif5a	0.79	M1-like MP	WT TAC vs WT Sham
Rnaset2a	-0.79	M1-like MP	WT TAC vs WT Sham
Fxyd5	0.79	M1-like MP	WT TAC vs WT Sham
Cdk2ap2	0.79	M1-like MP	WT TAC vs WT Sham
Chd7	0.79	M1-like MP	WT TAC vs WT Sham
Atpif1	-0.79	M1-like MP	WT TAC vs WT Sham
Cytip	0.78	M1-like MP	WT TAC vs WT Sham
Cdkn1a	0.78	M1-like MP	WT TAC vs WT Sham
Nfkbia	0.78	M1-like MP	WT TAC vs WT Sham
Samsn1	0.78	M1-like MP	WT TAC vs WT Sham
Gngt2	0.78	M1-like MP	WT TAC vs WT Sham
Mbnl1	-0.78	M1-like MP	WT TAC vs WT Sham
Lilra5	-0.77	M1-like MP	WT TAC vs WT Sham
Pde4b	0.77	M1-like MP	WT TAC vs WT Sham
Ctss	0.77	M1-like MP	WT TAC vs WT Sham
Tmcc1	-0.77	M1-like MP	WT TAC vs WT Sham
Hbb-bs	-0.77	M1-like MP	WT TAC vs WT Sham
Zfhx3	-0.77	M1-like MP	WT TAC vs WT Sham
Il1rn	0.76	M1-like MP	WT TAC vs WT Sham
Adam8	0.76	M1-like MP	WT TAC vs WT Sham
Lmnb1	0.76	M1-like MP	WT TAC vs WT Sham
mt-Rnr2	0.76	M1-like MP	WT TAC vs WT Sham
Hsp90aa1	0.76	M1-like MP	WT TAC vs WT Sham
Ighm	-0.75	M1-like MP	WT TAC vs WT Sham
Trem1	0.75	M1-like MP	WT TAC vs WT Sham
Pgk1	0.75	M1-like MP	WT TAC vs WT Sham
Rnaset2b	-0.75	M1-like MP	WT TAC vs WT Sham
Ndufb4	-0.75	M1-like MP	WT TAC vs WT Sham
Acadm	-0.74	M1-like MP	WT TAC vs WT Sham
Csrp3	-0.74	M1-like MP	WT TAC vs WT Sham
Gsr	0.74	M1-like MP	WT TAC vs WT Sham
Cotl1	0.74	M1-like MP	WT TAC vs WT Sham
Actn2	-0.74	M1-like MP	WT TAC vs WT Sham
Uck2	0.74	M1-like MP	WT TAC vs WT Sham
Fosl2	0.74	M1-like MP	WT TAC vs WT Sham
H2-Aa	-0.73	M1-like MP	WT TAC vs WT Sham
Slc7a11	0.73	M1-like MP	WT TAC vs WT Sham

Gm4604	-0.73	M1-like MP	WT TAC vs WT Sham
Arf1	0.73	M1-like MP	WT TAC vs WT Sham
Ryr2	-0.73	M1-like MP	WT TAC vs WT Sham
Arg1	-1.56	M1-like MP	miR-21 cKO TAC vs WT TAC
C1qc	1.45	M1-like MP	miR-21 cKO TAC vs WT TAC
Thbs1	-1.44	M1-like MP	miR-21 cKO TAC vs WT TAC
C1qb	1.35	M1-like MP	miR-21 cKO TAC vs WT TAC
Spp1	-1.31	M1-like MP	miR-21 cKO TAC vs WT TAC
Plaur	-1.29	M1-like MP	miR-21 cKO TAC vs WT TAC
C1qa	1.29	M1-like MP	miR-21 cKO TAC vs WT TAC
Srgn	-1.28	M1-like MP	miR-21 cKO TAC vs WT TAC
Apoe	1.24	M1-like MP	miR-21 cKO TAC vs WT TAC
Cd81	1.22	M1-like MP	miR-21 cKO TAC vs WT TAC
Ccl2	-1.18	M1-like MP	miR-21 cKO TAC vs WT TAC
Pf4	1.15	M1-like MP	miR-21 cKO TAC vs WT TAC
Cd72	1.11	M1-like MP	miR-21 cKO TAC vs WT TAC
Osm	-1.07	M1-like MP	miR-21 cKO TAC vs WT TAC
Ms4a7	1.03	M1-like MP	miR-21 cKO TAC vs WT TAC
Clec4n	-1.01	M1-like MP	miR-21 cKO TAC vs WT TAC
S100a4	-1.00	M1-like MP	miR-21 cKO TAC vs WT TAC
Vcan	-0.99	M1-like MP	miR-21 cKO TAC vs WT TAC
Anxa2	-0.96	M1-like MP	miR-21 cKO TAC vs WT TAC
Chil3	-0.95	M1-like MP	miR-21 cKO TAC vs WT TAC
Ccl9	-0.94	M1-like MP	miR-21 cKO TAC vs WT TAC
Ckb	0.94	M1-like MP	miR-21 cKO TAC vs WT TAC
S100a11	-0.92	M1-like MP	miR-21 cKO TAC vs WT TAC
Il1b	-0.91	M1-like MP	miR-21 cKO TAC vs WT TAC
Slamf9	0.90	M1-like MP	miR-21 cKO TAC vs WT TAC
S100a6	-0.90	M1-like MP	miR-21 cKO TAC vs WT TAC
Mt2	-0.89	M1-like MP	miR-21 cKO TAC vs WT TAC
Clec4d	-0.89	M1-like MP	miR-21 cKO TAC vs WT TAC
H2-Eb1	0.89	M1-like MP	miR-21 cKO TAC vs WT TAC
Rps28	-0.88	M1-like MP	miR-21 cKO TAC vs WT TAC
Dmkn	-0.88	M1-like MP	miR-21 cKO TAC vs WT TAC
Prdx6	-0.87	M1-like MP	miR-21 cKO TAC vs WT TAC
Cox17	-0.86	M1-like MP	miR-21 cKO TAC vs WT TAC
AW112010	0.85	M1-like MP	miR-21 cKO TAC vs WT TAC

AC121965.1	-0.84	M1-like MP	miR-21 cKO TAC vs WT TAC
Btg1	-0.83	M1-like MP	miR-21 cKO TAC vs WT TAC
Eno1	-0.83	M1-like MP	miR-21 cKO TAC vs WT TAC
Ccnd1	0.83	M1-like MP	miR-21 cKO TAC vs WT TAC
Hif1a	-0.82	M1-like MP	miR-21 cKO TAC vs WT TAC
Ccl12	0.82	M1-like MP	miR-21 cKO TAC vs WT TAC
Pkm	-0.82	M1-like MP	miR-21 cKO TAC vs WT TAC
Clec4e	-0.81	M1-like MP	miR-21 cKO TAC vs WT TAC
Nfil3	-0.81	M1-like MP	miR-21 cKO TAC vs WT TAC
Pou2f2	0.81	M1-like MP	miR-21 cKO TAC vs WT TAC
Lyz1	0.80	M1-like MP	miR-21 cKO TAC vs WT TAC
Gm34084	0.79	M1-like MP	miR-21 cKO TAC vs WT TAC
Xbp1	-0.78	M1-like MP	miR-21 cKO TAC vs WT TAC
Mgl2	0.78	M1-like MP	miR-21 cKO TAC vs WT TAC
S100a10	-0.78	M1-like MP	miR-21 cKO TAC vs WT TAC
Vim	-0.77	M1-like MP	miR-21 cKO TAC vs WT TAC
Rps27	-0.76	M1-like MP	miR-21 cKO TAC vs WT TAC
Tgm2	-0.75	M1-like MP	miR-21 cKO TAC vs WT TAC
Rps29	-0.75	M1-like MP	miR-21 cKO TAC vs WT TAC
Gm10076	-0.75	M1-like MP	miR-21 cKO TAC vs WT TAC
Dnaja1	-0.74	M1-like MP	miR-21 cKO TAC vs WT TAC
Sec61g	-0.74	M1-like MP	miR-21 cKO TAC vs WT TAC
H2-Aa	0.73	M1-like MP	miR-21 cKO TAC vs WT TAC
Fcrls	0.72	M1-like MP	miR-21 cKO TAC vs WT TAC
Slc16a3	-0.72	M1-like MP	miR-21 cKO TAC vs WT TAC
Clec7a	-0.72	M1-like MP	miR-21 cKO TAC vs WT TAC
Fn1	-0.72	M1-like MP	miR-21 cKO TAC vs WT TAC
Selenop	0.72	M1-like MP	miR-21 cKO TAC vs WT TAC
Ccr1	-0.71	M1-like MP	miR-21 cKO TAC vs WT TAC
Ly6c2	-0.71	M1-like MP	miR-21 cKO TAC vs WT TAC
H2-Ab1	0.71	M1-like MP	miR-21 cKO TAC vs WT TAC
Hspa8	-0.71	M1-like MP	miR-21 cKO TAC vs WT TAC
Ly6a	0.70	M1-like MP	miR-21 cKO TAC vs WT TAC
Timp1	-0.69	M1-like MP	miR-21 cKO TAC vs WT TAC
Ldha	-0.69	M1-like MP	miR-21 cKO TAC vs WT TAC
Msr1	-0.68	M1-like MP	miR-21 cKO TAC vs WT TAC
Pltp	0.68	M1-like MP	miR-21 cKO TAC vs WT TAC

Uck2	-0.68	M1-like MP	miR-21 cKO TAC vs WT TAC
Lair1	0.68	M1-like MP	miR-21 cKO TAC vs WT TAC
Il1rn	-0.67	M1-like MP	miR-21 cKO TAC vs WT TAC
Trem1	-0.67	M1-like MP	miR-21 cKO TAC vs WT TAC
Mrpl52	-0.67	M1-like MP	miR-21 cKO TAC vs WT TAC
Ifitm1	-0.67	M1-like MP	miR-21 cKO TAC vs WT TAC
Cstb	-0.66	M1-like MP	miR-21 cKO TAC vs WT TAC
Ccl7	-0.66	M1-like MP	miR-21 cKO TAC vs WT TAC
Gm28438	-0.66	M1-like MP	miR-21 cKO TAC vs WT TAC
Rpl38	-0.66	M1-like MP	miR-21 cKO TAC vs WT TAC
Adgre1	0.66	M1-like MP	miR-21 cKO TAC vs WT TAC
Fcgr4	0.64	M1-like MP	miR-21 cKO TAC vs WT TAC
Sdc4	-0.64	M1-like MP	miR-21 cKO TAC vs WT TAC
Slpi	-0.63	M1-like MP	miR-21 cKO TAC vs WT TAC
Actb	-0.63	M1-like MP	miR-21 cKO TAC vs WT TAC
Ier3	-0.63	M1-like MP	miR-21 cKO TAC vs WT TAC
Pgk1	-0.63	M1-like MP	miR-21 cKO TAC vs WT TAC
Ighm	0.62	M1-like MP	miR-21 cKO TAC vs WT TAC
Ass1	-0.62	M1-like MP	miR-21 cKO TAC vs WT TAC
Tgfbi	-0.62	M1-like MP	miR-21 cKO TAC vs WT TAC
Mt1	-0.62	M1-like MP	miR-21 cKO TAC vs WT TAC
Ltb4r1	-0.62	M1-like MP	miR-21 cKO TAC vs WT TAC
Cd74	0.62	M1-like MP	miR-21 cKO TAC vs WT TAC
Pim1	-0.61	M1-like MP	miR-21 cKO TAC vs WT TAC
Lmnb1	-0.61	M1-like MP	miR-21 cKO TAC vs WT TAC
Kdm6b	-0.61	M1-like MP	miR-21 cKO TAC vs WT TAC
Igfbp7	-0.61	M1-like MP	miR-21 cKO TAC vs WT TAC
Itm2b	0.61	M1-like MP	miR-21 cKO TAC vs WT TAC
Cxcl2	-0.61	M1-like MP	miR-21 cKO TAC vs WT TAC
Mif	-0.60	M1-like MP	miR-21 cKO TAC vs WT TAC
Trem2	0.60	M1-like MP	miR-21 cKO TAC vs WT TAC
Cytip	-0.60	M1-like MP	miR-21 cKO TAC vs WT TAC
Usmg5	-0.60	M1-like MP	miR-21 cKO TAC vs WT TAC
Cxcl16	0.60	M1-like MP	miR-21 cKO TAC vs WT TAC
Emilin2	-0.60	M1-like MP	miR-21 cKO TAC vs WT TAC
Pde4b	-0.60	M1-like MP	miR-21 cKO TAC vs WT TAC
F10	-0.60	M1-like MP	miR-21 cKO TAC vs WT TAC

Bcl2a1d	-0.59	M1-like MP	miR-21 cKO TAC vs WT TAC
Samsn1	-0.59	M1-like MP	miR-21 cKO TAC vs WT TAC
Tmsb10	-0.59	M1-like MP	miR-21 cKO TAC vs WT TAC
Gatm	0.59	M1-like MP	miR-21 cKO TAC vs WT TAC
Ccl6	-0.57	M1-like MP	miR-21 cKO TAC vs WT TAC
Atp5k	-0.56	M1-like MP	miR-21 cKO TAC vs WT TAC
Ninj1	-0.56	M1-like MP	miR-21 cKO TAC vs WT TAC
Nfkbia	-0.56	M1-like MP	miR-21 cKO TAC vs WT TAC
Adam8	-0.56	M1-like MP	miR-21 cKO TAC vs WT TAC
Actg1	-0.56	M1-like MP	miR-21 cKO TAC vs WT TAC
Tes	-0.55	M1-like MP	miR-21 cKO TAC vs WT TAC
Ptpn1	-0.55	M1-like MP	miR-21 cKO TAC vs WT TAC
Rps21	-0.55	M1-like MP	miR-21 cKO TAC vs WT TAC
Card19	-0.55	M1-like MP	miR-21 cKO TAC vs WT TAC
Slc7a11	-0.55	M1-like MP	miR-21 cKO TAC vs WT TAC
Lgmn	0.55	M1-like MP	miR-21 cKO TAC vs WT TAC
Hexb	0.55	M1-like MP	miR-21 cKO TAC vs WT TAC
Mcemp1	-0.55	M1-like MP	miR-21 cKO TAC vs WT TAC
Ms4a6d	-0.55	M1-like MP	miR-21 cKO TAC vs WT TAC
Socs3	-0.55	M1-like MP	miR-21 cKO TAC vs WT TAC
Klf2	-0.55	M1-like MP	miR-21 cKO TAC vs WT TAC
Adora2b	-0.54	M1-like MP	miR-21 cKO TAC vs WT TAC
Tsc22d3	-0.54	M1-like MP	miR-21 cKO TAC vs WT TAC
Irf8	0.54	M1-like MP	miR-21 cKO TAC vs WT TAC
Mmp19	-0.54	M1-like MP	miR-21 cKO TAC vs WT TAC
Fosl2	-0.53	M1-like MP	miR-21 cKO TAC vs WT TAC
Lhfpl4	-0.53	M1-like MP	miR-21 cKO TAC vs WT TAC
Zmynd15	0.53	M1-like MP	miR-21 cKO TAC vs WT TAC
Fabp4	0.53	M1-like MP	miR-21 cKO TAC vs WT TAC
Rgs10	0.53	M1-like MP	miR-21 cKO TAC vs WT TAC
Crip1	-0.53	M1-like MP	miR-21 cKO TAC vs WT TAC
Pgam1	-0.52	M1-like MP	miR-21 cKO TAC vs WT TAC
Hspa1a	0.52	M1-like MP	miR-21 cKO TAC vs WT TAC
Plek	-0.52	M1-like MP	miR-21 cKO TAC vs WT TAC
Rpl37a	-0.52	M1-like MP	miR-21 cKO TAC vs WT TAC
Gm4149	-0.52	M1-like MP	miR-21 cKO TAC vs WT TAC
Saa3	0.51	M1-like MP	miR-21 cKO TAC vs WT TAC

Cd63	0.51	M1-like MP	miR-21 cKO TAC vs WT TAC
Rps27rt	-0.51	M1-like MP	miR-21 cKO TAC vs WT TAC
Cd14	-0.51	M1-like MP	miR-21 cKO TAC vs WT TAC
Clec4b1	0.51	M1-like MP	miR-21 cKO TAC vs WT TAC
Fabp5	-0.51	M1-like MP	miR-21 cKO TAC vs WT TAC
Mef2c	0.51	M1-like MP	miR-21 cKO TAC vs WT TAC
Rpl37	-0.51	M1-like MP	miR-21 cKO TAC vs WT TAC
Sem1	-0.51	M1-like MP	miR-21 cKO TAC vs WT TAC
Blvrb	0.51	M1-like MP	miR-21 cKO TAC vs WT TAC
Emb	-0.50	M1-like MP	miR-21 cKO TAC vs WT TAC
Axl	0.50	M1-like MP	miR-21 cKO TAC vs WT TAC
Tpi1	-0.50	M1-like MP	miR-21 cKO TAC vs WT TAC
Jaml	-0.50	M1-like MP	miR-21 cKO TAC vs WT TAC
Ccnd3	-0.50	M1-like MP	miR-21 cKO TAC vs WT TAC
Ehd4	0.50	M1-like MP	miR-21 cKO TAC vs WT TAC
Capg	-0.50	M1-like MP	miR-21 cKO TAC vs WT TAC
Havcr2	-0.50	M1-like MP	miR-21 cKO TAC vs WT TAC
Ctsb	0.50	M1-like MP	miR-21 cKO TAC vs WT TAC
Errfi1	-0.50	M1-like MP	miR-21 cKO TAC vs WT TAC
Fosb	0.50	M1-like MP	miR-21 cKO TAC vs WT TAC
Csrnp1	-0.49	M1-like MP	miR-21 cKO TAC vs WT TAC
Bst2	0.49	M1-like MP	miR-21 cKO TAC vs WT TAC
Hp	-0.49	M1-like MP	miR-21 cKO TAC vs WT TAC
Grn	0.48	M1-like MP	miR-21 cKO TAC vs WT TAC
C3ar1	0.48	M1-like MP	miR-21 cKO TAC vs WT TAC
Fkbp5	-0.48	M1-like MP	miR-21 cKO TAC vs WT TAC
Clec4a1	0.48	M1-like MP	miR-21 cKO TAC vs WT TAC
mt-Nd1	0.48	M1-like MP	miR-21 cKO TAC vs WT TAC
Ccnd2	0.47	M1-like MP	miR-21 cKO TAC vs WT TAC
Pglyrp1	-0.47	M1-like MP	miR-21 cKO TAC vs WT TAC
Gsr	-0.47	M1-like MP	miR-21 cKO TAC vs WT TAC
Cox7c	-0.46	M1-like MP	miR-21 cKO TAC vs WT TAC
Gda	-0.46	M1-like MP	miR-21 cKO TAC vs WT TAC
Gm42031	-0.46	M1-like MP	miR-21 cKO TAC vs WT TAC
Rpl35	-0.46	M1-like MP	miR-21 cKO TAC vs WT TAC
Lacc1	0.46	M1-like MP	miR-21 cKO TAC vs WT TAC
Atp5e	-0.46	M1-like MP	miR-21 cKO TAC vs WT TAC

Slfn2	-0.46	M1-like MP	miR-21 cKO TAC vs WT TAC
Lpl	0.46	M1-like MP	miR-21 cKO TAC vs WT TAC
Jun	0.46	M1-like MP	miR-21 cKO TAC vs WT TAC
Pet100	-0.46	M1-like MP	miR-21 cKO TAC vs WT TAC
Fgd2	0.45	M1-like MP	miR-21 cKO TAC vs WT TAC
Tmem176a	0.45	M1-like MP	miR-21 cKO TAC vs WT TAC
Rpl39	-0.45	M1-like MP	miR-21 cKO TAC vs WT TAC
Crem	-0.45	M1-like MP	miR-21 cKO TAC vs WT TAC
Fam49b	-0.45	M1-like MP	miR-21 cKO TAC vs WT TAC
Dhrs3	0.45	M1-like MP	miR-21 cKO TAC vs WT TAC
Cebpb	-0.45	M1-like MP	miR-21 cKO TAC vs WT TAC
Ankrd1	-0.45	M1-like MP	miR-21 cKO TAC vs WT TAC
Slc2a1	-0.45	M1-like MP	miR-21 cKO TAC vs WT TAC
Tomm7	-0.44	M1-like MP	miR-21 cKO TAC vs WT TAC
Bmyc	0.44	M1-like MP	miR-21 cKO TAC vs WT TAC
mt-Atp6	0.44	M1-like MP	miR-21 cKO TAC vs WT TAC
Il4ra	-0.44	M1-like MP	miR-21 cKO TAC vs WT TAC
Lgals3bp	0.44	M1-like MP	miR-21 cKO TAC vs WT TAC

Table III. Ligand-receptor pairs deregulated after miR-21 deletion in macrophages

Ligand	Receptor	cell_from_logFC	cell_from_q.value	cell_from	cell_to_logFC	cell_to_q.value
Thbs1	Sdc4	-1.43925	2.69E-50	MP_M1-like	-0.6655	1.30E-16
Spp1	Itga5	-1.31175	1.04E-05	MP_M1-like	-0.45576	1.08E-08
Tgm2	Sdc4	-0.7489	1.06E-15	MP_M1-like	-0.6655	1.30E-16
Fn1	Itga5	-0.71854	9.75E-21	MP_M1-like	-0.45576	1.08E-08
Fn1	Plaur	-0.71854	9.75E-21	MP_M1-like	-0.44621	1.09E-14
Tgfb1	Tgfbr2	-0.31326	0.017918	MP_M1-like	0.312031	5.15E-10
Uba52	Tgfbr2	-0.32443	1.52E-07	MP_M1-like	0.312031	5.15E-10
Osm	Il6st	-1.06805	3.49E-32	MP_M1-like	0.343677	8.88E-10
Thbs1	Cd47	-1.43925	2.69E-50	MP_M1-like	0.26257	3.57E-06
Thbs1	Lrp1	-1.43925	2.69E-50	MP_M1-like	0.358829	4.75E-19
C1qb	Lrp1	1.34923	7.07E-77	MP_M1-like	0.358829	4.75E-19
Apoe	Lrp1	1.241785	6.57E-20	MP_M1-like	0.358829	4.75E-19
Lpl	Lrp1	0.456847	5.49E-12	MP_M1-like	0.358829	4.75E-19
Gas6	Axl	0.349102	1.66E-08	MP_M1-like	0.291546	5.85E-09