

SUPPORTING INFORMATION

Supporting Information Table 1. Body weight, kidney weight and systolic blood pressure (SBP) in JAK2^{Ctrl} and JAK2^{podKO} mice.

	Body weight (g)	Kidney weight (g)	Kidney weight: body weight (%)	SBP (mmHg)
JAK2 ^{Ctrl}	23.5±0.4	0.19±0.01	0.82±0.03	89±2
JAK2 ^{podKO}	23.7±0.4	0.18±0.01	0.79±0.02	88±3

Supporting Information Table 2. Relative mRNA levels of genes involved in the fusion of autophagosomes with lysosomes.

	Scramble (AU)	JAK2 siRNA (AU)
ATP6AP2	1.00±0.04	1.05±0.02
Autophagy related 14	1.00±0.05	1.08±0.05
Caveolin-1	1.00±0.02	0.96±0.01
CD38	1.00±0.05	1.06±0.10
DNA damage regulated autophagy modulator 1	1.02±0.10	0.91±0.10
FAM176A	1.09±0.07	0.95±0.04
Histone deacetylase 6	1.01±0.07	1.22±0.04*
Huntingtin-associated protein 1	1.00±0.03	1.19±0.07*
Niemann-Pick C1	1.00±0.02	1.08±0.03
Pleckstrin homology domain-containing family M member 1	1.01±0.06	1.02±0.05
SNAP-associated protein	1.00±0.05	1.12±0.01
Sorting nexin 14	1.00±0.04	1.13±0.02*
Syntaxin 17	1.00±0.05	1.06±0.01
Tectonin β -propeller repeat containing 1	1.01±0.08	1.01±0.04
Vesicle-associated membrane protein 7	1.00±0.05	1.11±0.06
Vesicle-associated membrane protein 8	1.00±0.02	1.15±0.03 [†]

Values normalized to RPL13a. AU = arbitrary units. *p<0.05, [†]p<0.01.

Supporting Information Table 3. Primer sequences used in the study.

	Sequences (5'→ 3')
Forward α -galactosidase	TGGGATCAAACACCTCGCAA
Reverse α -galactosidase	CCAGTCAGCAAATGTCTGCG
Forward ATP6AP2	TCTCTCCGAACTGCAAGTGCAACA
Reverse ATP6AP2	CCAAACCTGCCAGCTCCAATGAAT
Forward ATPase H ⁺ transporting accessory protein 1	TACACCGCAGCTCTTACTGC
Reverse ATPase H ⁺ transporting accessory protein 1	AGGAGATGCCACCTGAGTCT
Forward ATPase H ⁺ transporting lysosomal V0 subunit C	TGCTGGTATTTAGAGCGCAG
Reverse ATPase H ⁺ transporting lysosomal V0 subunit C	GCCTCATGACTGACATGGCT
Forward Autophagy related 14	GTGGCGAAAACCTCAGCAAG
Reverse Autophagy related 14	GAACCAAGAGGTCACCGAGG
Forward Beclin 1	AGGCATGGAGGGGTCTAAGG
Reverse Beclin 1	GCCTGGGCTGTGGTAAGTAAT
Forward Cathepsin B	ATGTGGTGGTCCTTGATCCTT
Reverse Cathepsin B	CTTCCTGGCAGTTTGGGTCC
Forward Cathepsin D	CTATAAGCCGGCGACCTCTG
Reverse Cathepsin D	TGAACTTGCGCAGAGGGATT
Forward Caveolin-1	AAAAGTTGTAGCGCCAGGCT
Reverse Caveolin-1	GACCACGTCGTCGTTGAGAT
Forward CD38	GATGCTCAATGGGTCCCTCC
Reverse CD38	GGAAGCTCCTTCGATGTCGT
Forward Cystinosin	CAAGTCCTGGGGGCTTAGAG
Reverse Cystinosin	GGCTGGGTAGGCATCTTGAA

Forward DNA damage regulated autophagy modulator 1	GCTTCTTGGTCCGACGAG
Reverse DNA damage regulated autophagy modulator 1	AGTGTCGTTGGTGCTATCCA
Forward FAM176A	GAAGTACGCGCCAGTCGT
Reverse FAM176A	TCAGCACCTTTCCAAGGC
Forward Histone deacetylase 6	AGCCTGGTTAAACGGTAGGC
Reverse Histone deacetylase 6	AAGGCTCTCTAATCTGCGCC
Forward Huntingtin-associated protein 1	TCCCTCTGAGGAGCTGTCTG
Reverse Huntingtin-associated protein 1	GGGGCATCAGAACGACTGAA
Forward Lysosomal α -glucosidase	AGCGAGTTCCTGCTTTGGAG
Reverse Lysosomal α -glucosidase	CCGAAGCATGAGATGACCCA
Forward Mucopilin-1	GGCGCCTATGACACCATCAA
Reverse Mucopilin-1	CAGTTCACCAGCAGCGAATG
Forward Niemann-Pick C1	CCTACCCACATGCTGTCTC
Reverse Niemann-Pick C1	CTGTCTTCCCGGGCCATAAC
Forward Nuclear receptor binding factor-2	TGTCGCTCTTGGGCTCTCA
Reverse Nuclear receptor binding factor-2	CCAGCAGCTAACAAACGGTC
Forward Pleckstrin homology domain-containing family M member 1	TCGAAGTCCAACACTCAGGC
Reverse Pleckstrin homology domain-containing family M member 1	CTCAAAGTGCAGGTGTGTGC
Forward Ras-related GTP binding C	AAGTTTTTGTGCGGCATCGG
Reverse Ras-related GTP binding C	GGTCATGATCAGGCGAGGAG
Forward Ribosomal protein large p0	GCGTCCTGGCATTGTCTGT
Reverse Ribosomal protein large p0	GAAGGCCTTGACCTTTTCAGTAAG
Forward Ribosomal protein L13a	GCTCTCAAGGTTGTTCCGGCTGA
Reverse Ribosomal protein L13a	AGATCTGCTTCTTCTTCCGATA
Forward Serine/threonine kinase 4	TGTGTGGCAGACATCTGGTC

Reverse Serine/threonine kinase 4	ACAAACGGGTGCTGTAGGAG
Forward SNAP-associated protein	GCTACAGAACTGTGCCGGAT
Reverse SNAP-associated protein	AACCGCCTTAGTCGTTCCCTG
Forward Sorting nexin 14	CCAAATTCAACAGAAGCACACA
Reverse Sorting nexin 14	TGTCCAAGTCTCGTCTGTC
Forward Syntaxin 17	CTAGGCGGGAGGTGTTTCTG
Reverse Syntaxin 17	AGCCTGCGTAACTTCACCTT
Forward Tectonin β -propeller repeat containing 1	GAATTTTGGAGGGGAGCCCA
Reverse Tectonin β -propeller repeat containing 1	TGGCTGACATCCTCTCGGTA
Forward Transcription factor EB	CTCTTGCAGAAGACCCCTCT
Reverse Transcription factor EB	AGGGTGGTGGGATAGTGCAA
Forward Transcription factor EB promoter	GCTACACCCCAGGAAACGTC
Reverse Transcription factor EB promoter	TTGTTTTGGTGAGTCCCGCA
Forward Vacuolar protein sorting-associated protein 18	TGGGCGAGGTTGTGATTACC
Reverse Vacuolar protein sorting-associated protein 18	AAGGACGAGACGATCGAGGA
Forward Vesicle-associated membrane protein 7	CAGACGGTACTCGGTCAGATT
Reverse Vesicle-associated membrane protein 7	CTTAGCCAGAATCTGCTCTGTC
Forward Vesicle-associated membrane protein 8	AACCTGCAGTTACGTGTGTG
Reverse Vesicle-associated membrane protein 8	TGTTTCAGACGTGGCTTCCAA

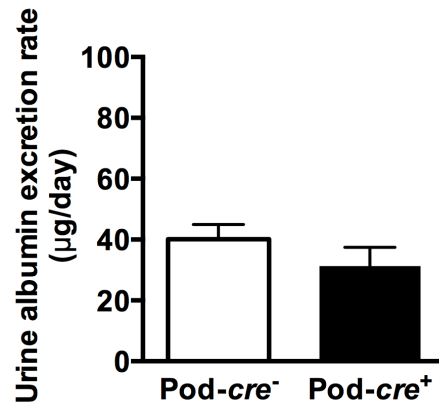
SUPPORTING INFORMATION FIGURE LEGENDS

SUPPORTING INFORMATION FIGURE 1. Urine albumin excretion in Podocin-*cre*⁻ and Podocin-*cre*⁺ mice aged six months.

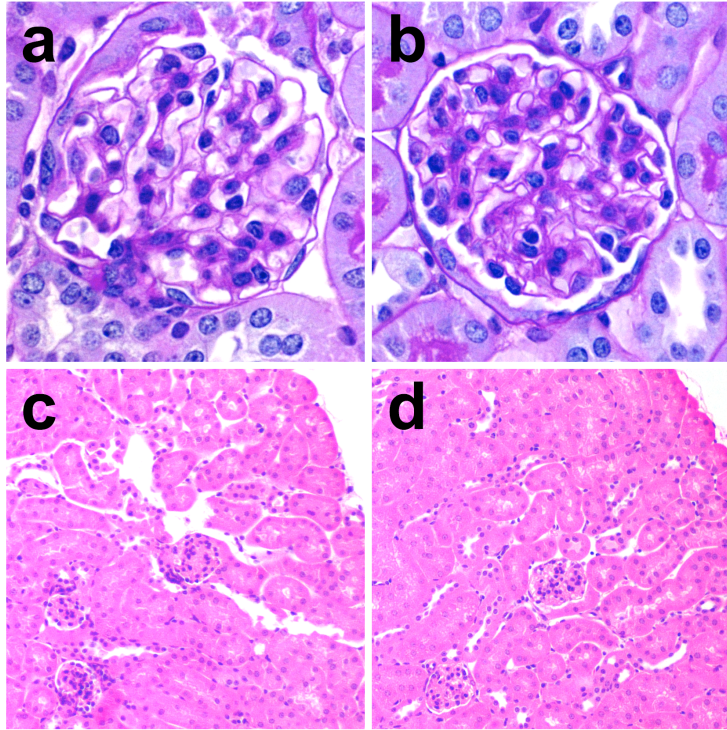
SUPPORTING INFORMATION FIGURE 2. Representative periodic acid-Schiff (a and b, original magnification x 400) and hematoxylin and eosin (c and d, original magnification x 100) stained kidney sections from JAK2^{Ctrl} (a and c) and JAK2^{podKO} mice (b and d) aged 10 weeks.

SUPPORTING INFORMATION FIGURE 3. Representative flow cytometry histograms from primary cultured cells stained for nephrin.

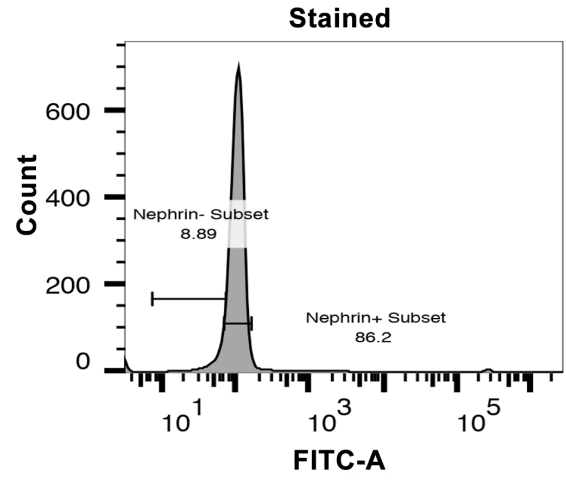
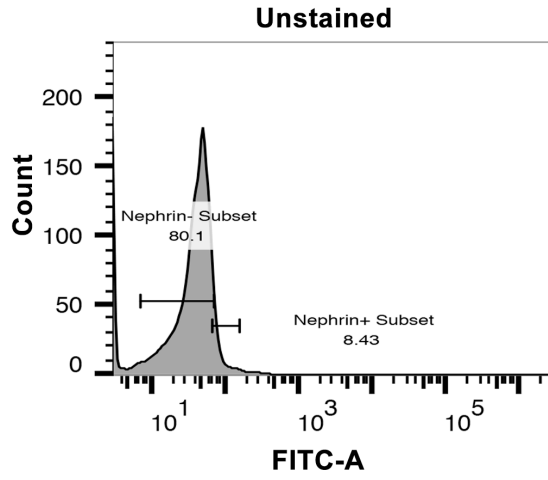
SUPPORTING INFORMATION FIGURE 4. Putative binding sites for STAT1 within the mouse TFEB promoter.



Supporting Information Figure 1.



Supporting Information Figure 2.



Supporting Information Figure 3.

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>chromosome:GRCm38:17:47735530:47793019:1
-1500 TATCCTAGTGCCGGGAGCTTCCAGCAGGAGGGACAGGCATGGCAGAAGACTAGTAATTCT
-1440 GAGCAGTACAATGTAGGTGCTGACGCTGGTCCAACCTCTCTCACACTTAGGGGCAGGGAC
-1380 AAAAGGGCAAGATCCAGGTCATGTACCACATTCCAAACGGAGACAGGATATATCGTGAAA
-1320 ACGGTGGGCTCTTGAGCAAGGGGTTTTACATCTCACACCTGCCGGATGAAACCAAAAATC
-1260 ATGCTCCGAGCACAGTGGCCGTTTCCCACCAAGCAGGCAAACCTGCAGAGGGCATTTCATT
      85%
-1200 CCATCAGGAGTGTCTGAATAACAAAACAAGTCAGGAGCAGCGGCACACACCTCCGACTCC
-1140 AGCCTTCTTCGGAAAGCAGAGGCAGGCAGAGCTCCGTCAGATTGAGGGCACTATAATCAAC
      96%
-1080 TAATGAATTC TAGGCCACCTAGGTTATTGGGTGAGTCTGTCTCCACGAAACAAAGCAAT
-1020 GGTAGAAATAACAATAAACAGGTTTTAAGGCCAAGCACGTGAACCC TGGAGTGTGGCTT
-960 CAGTGCTCTCGCAGACCTTGCCTGGAAATCTCACAAAGAGAACTGTTTTGATTACAGTTA
      94%
-900 AGATATCCTGCCTTCCTTTATAACCTTTTACCTAATCAATTACAACAGTATCTGCTACAC
-840 CCCAGGAAACGTCCCGTATCTTATTTAAATTTCTCAGCAGTCCTTTGAAAGATAACTGCG
      88%
-780 GGACTCACCAAAAACAAAAGTATGGCTATGGTAAAAGACAAGGAGAAGCCCTTGCCAGTT
-720 TCTCTGTCAACTTCTCTTAATCCCTATGTTTTAAATCTACATTA AAAAAAAAAATATATAT
-660 ATATATATATATATTTAAACCAGGCAGTAGTGGTATACACTTTTAATCC CAGCACTTGAA
-600 AGACAGGTGGATCTCTGTGAATTTAAGGCCAGACTGTCTACAAATCTAGTTGTAGAACAG
-540 CCAAGGCTACACAAAGAAACCTTGTGTTAAAGAACCATATATATATACTTACATAAATAT
-480 ATATTTAATAAACTAAAGCTCTGCTTCATACTGGCTTGCTCTGAAATTATAATAAATAT
-420 AATAGAGCAACAACAATAATATTGTTATTATTATTTAACAAAGAAATCAAAACTCTCCCC
-360 AAGTGGAAAGTTGCTAAGGGATAGGGTAACTTCTCAGGTTGCTGCTGGCAATTATGGGGGT
-300 GGGATCCTATATTTTTCTCACACTTCTTGAAAAAGCAGCTTGCTATTGGTCCTTTTCAA
      88%
-240 GATGTAATAATATAGAAAGTCATATCACGGGCCATCATTGACAGAAAAAAGAGAGAAAA
-180 TCTGAAAAGGAATAAAGACAAACGTTTTAAAGTTAAAAATTGACTCCTAGGGAACAGCGG
-120 CCAGTAGAATGGAAGTGC AAATCCCGGCAGCCCTTCGCGGCTGCGACGGGGACTACATT
-60 PCCCAGCGGGCACAGCGGTAGGCCTATGGGGGGCGTCCG CAGGAGGGGCGGGTGTGCC
      94%

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Supporting Information Figure 4.