

Supplementary Table 1. General data of DN patients

Parameter	Value
Number of patients	22
Gender (male/female)	16/6
Age, year	46.09±2.54
Known duration of diabetes, year	10.71±1.54
HbA1c, %	7.48±0.48
FPG, mmol/L	7.11±0.75
Serum albumin, g/L	31.06±1.31
Triglycerides, mmol/L	10.26±7.78
Cholesterol, mmol/L	
Total	5.53±0.47
LDL	3.08±0.39
HDL	0.97±0.05
ESR, mm/1hr	52.63±7.00
Serum creatinine, µmol/L	159.43±15.04
Urinary protein, g/24 hours	5.86±0.94
eGFR, ml/minute/1.73 m ²	51.08±6.00

[Abbreviations] DN, diabetic nephropathy; eGFR, estimated glomerular filtration rate; ESR, erythrocyte sedimentation rate; FPG, fasting plasma glucose; HbA1c, hemoglobin A1c; HDL, high-density lipoprotein; LDL, low-density lipoprotein.

Supplementary Table 2. Primer sequences used in qRT-PCR

	Forward primer	Reverse primer
<i>Il1β</i>	AGCTCTCCACCTCAATGGAC	TGCTTGGGATCCACACTCT
<i>Il4</i>	GGTCTCAACCCCAGCTAGT	GCCGATGATCTCTCTCAAGTGAT
<i>Il6</i>	ACTTACAAGTCCGGAGAGG	TTGCCATTGCACAACCTCTT
<i>Il18</i>	CTTCTGCAACCTCCAGCATC	GTGAAGTCGGCCAAAGTTGT
<i>Il23</i>	GCAGCTCTCTCGGAATCTCT	AAGCAGAAGTGGCTGTTGTC
<i>Il27</i>	CGCAGGGAATTCACAGTCAG	GTGGACATAGCCCTGAACCT
<i>Tgf</i>	CAGACATTCGGGAAGCAGTG	TCCACATGTTGCTCCACAC
<i>Tnf</i>	ACAAGATGCTGGGACAGTGA	ACATTCGAGGCTCCAGTGAA
<i>18S</i>	GTAACCCGTTGAACCCATT	CCATCCAATCGGTAGTAGCG
<i>Cxcl9</i>	GAGGCTCACGTCACCAAATC	CAACTCTGGTGGTCTCCACT
<i>Cxcr3</i>	GCCAAGCCATGTACCTTGAG	AGTCAGAGAAGTCGCTCTCG
<i>Cd3d</i>	GTCCATTACCGAATGTGCCA	CGGTCTCATGTCCTGCAAAG
<i>Ltb</i>	TCATAGGCGCTTGGATGAGT	CGACGTGGCAGTAGAGGTAA
<i>Zap70</i>	TGGACTTCATCAAGCAGGGT	GCGATCCTCCCACTGTAGA

Supplementary Figure Legends

Supplementary Figure S1. 2D-PCA plot. The blue spots represent the wild type control group; the red spots represent the *C3aR*^{-/-} control group; The dark brown spots represent the wild type diabetic group; the yellow ochre spots represent the *C3aR*^{-/-} diabetic group.

Abbreviations: Ctrl, control; KO, knockout; STZ, streptozotocin; WT, wild type.

Supplementary Figure S2. 3D-PCA plot. The blue spots represent the wild type diabetic group; the red spots represent the *C3aR*^{-/-} diabetic group.

Abbreviations: STZ, streptozotocin; WT, wild type.

Supplementary Figure S3. C3aR deficiency decreased renal T cells and macrophages infiltration in diabetic mice

Representative immunohistochemical staining of renal CD4⁺ T cells in diabetic mice, Bar=100μm (A) and semiquantitative analysis (B). Representative immunohistochemical staining of CD8⁺ T cells in diabetic mice, Bar=100μm (C) and semiquantitative analysis (D). Representative immunohistochemical staining of renal macrophages infiltration in diabetic mice, Bar=100μm (E) and semiquantitative analysis (F). ****p* < 0.001; ***p* < 0.01; **p* < 0.05.

Abbreviations: WT, wild type.