Supplementary Table 1: Assays and primers used for quantitative polymerase chain reaction (qPCR)

Gene	Assay ID	Gene	Assay ID
Ccl2 (Mcp-1)	*Mm00441242_m1*	Stat1	*Mm01257286_m1*
Ccl5 (Rantes)	*Mm01302428_m1*	Stat3	*Mm01219775_m1*
Cxcl10	*Mm00445235_m1*	Socs1	*Mm00782550_s1*
Ifnγ	*Mm01168134_m1*	Socs3	*Mm00545913_s1*
Tnf	*Mm00443258_m1*	Nfe2l2	*Mm00477784_m1*
Il12	*Mm01288989_m1*	Hmox-1	*Mm00516005_m1*
Havcr1 (Kim-1)	*Mm00506686_m1*	Sod1	*Mm01344233_g1*
Lcn2 (Ngal)	*Mm01324470_m1*	Catalase	*Mm00437992_m1*
18S	*4310893E*		

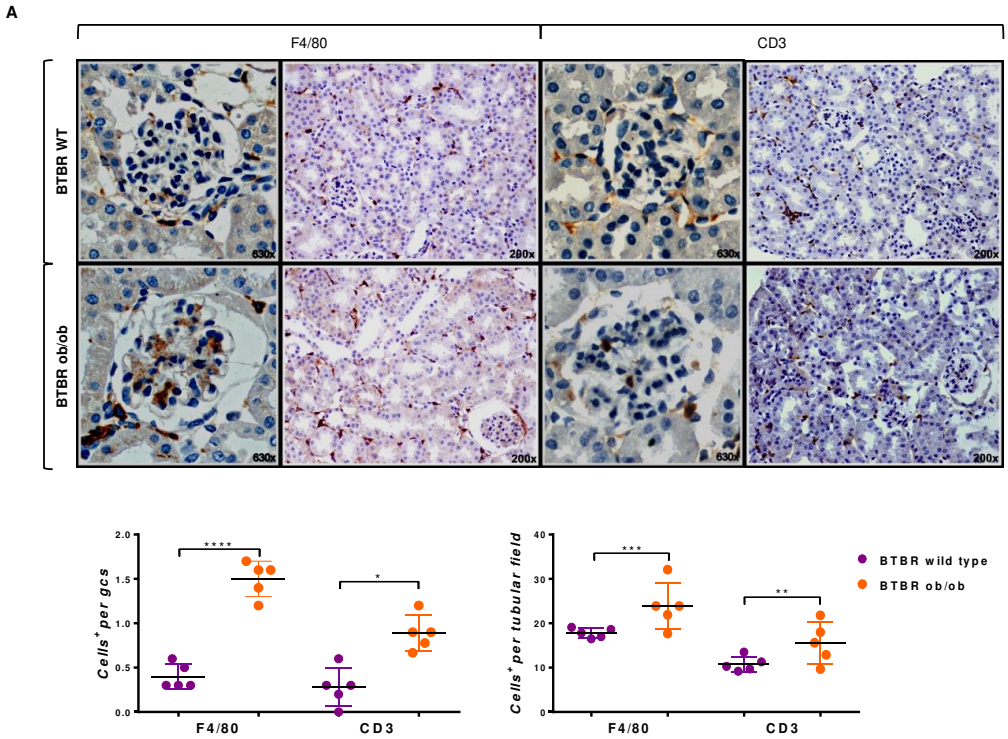
Gene	Forward (5'-3')	Reverse (5'-3')
Nox1	CCAACAGGCCATGGATGGAT	CACTCCAGTAAGCCAGCAA
Nox4 (Renox)	CCCTCCTGGCTGCATTAGTC	AACCCTCGAGGCAAAGATCC
SR-A/Cd204	TGAACGAGAGGATGCTGACTG	GGAGGGGCCATTTTTAGTGC
SR-B/Cd36	GAACCACTGCTTTCAAAAACTGG	TGCTGTTCTTTGCCACGTCA
Abca1	AGTGATAATCAAAGTCAAAGGCACAC	AGCAACTTGGCACTAGTAACTCTG
Abcg1	TTCATCGTCCTGGGCATCTT	CGGATTTTGTATCTGAGGACGAA
18S	CCGTCGTAGTTCCGACCATAA	CAGCTTTGCAACCATACTCCC

Abbreviations: Ccl2. C-C Motif Chemokine Ligand 2; Ccl5. C-C Motif Chemokine Ligand 5; Cxcl10. C-X-C Motif Chemokine Ligand 10; Ifnγ. Interferon Gamma; Tnf. Tumoral Necrosis Factor; Il12. Interleukin 12; Kim-1. Kidney Injury Molecule-1; Lcn2. Lipocalin 2; Stat1. Signal Transducer and Activator of Transcription 1; Stat3. Signal Transducer and Activator of Transcription 3; Socs1. Suppressor of Cytokine Signaling 1; Socs3. Suppressor of Cytokine Signaling; Nfe2l2. Nuclear factor erythroid 2-related factor 2; Hmox-1. Heme-oxygenase 1; Sod1. Superoxide Dismutase 1; Catalase; 18S. 18 S ribosomal RNA; Nox1. NADPH Oxidase 1; Nox4. NADPH oxidase 4; SR-A/Cd204. Scavenger Receptor Class A/Cluster of Differentiation 204; SR-B/Cd36. Scavenger Receptor Class B/Cluster of Differentiation 36; Abca1. ATP Binding Cassette Subfamily A Member 1; Abcg1. ATP Binding Cassette Subfamily G Member 1.

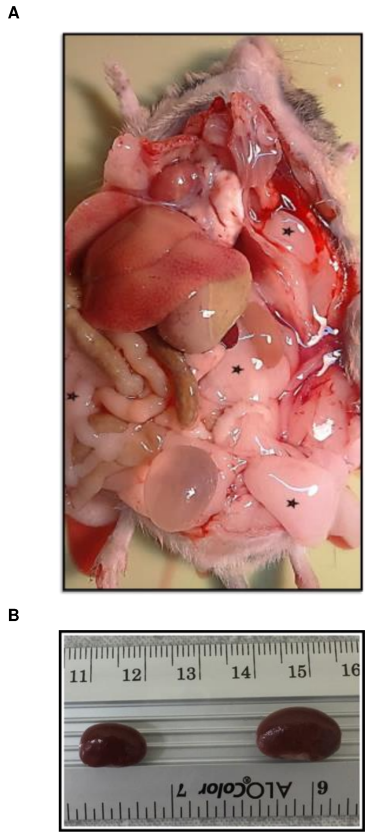
Supplementary Table 2: Metabolic parameters in BTBR mice and treatment with MiS1 peptide

Week	Mice Group	Body Weight	Glycemia	Creatinine
4	Wild type	14.3 ± 0.7	133 ± 12.3	-
	ob/ob	17.6 ± 1.1*	145 ± 9.1	-
6	Wild type	24.9 ± 0.8	191 ± 4.8	-
	ob/ob	38.3 ± 0.9**	241.3 ± 17.6*	-
12	Wild type	34.3 ± 0.6	171 ± 6	0.44 ± 0.03
	ob/ob	60.1 ± 1.2**	573.6 ± 14.4****	0.74 ± 0.1**
	Veh	61.3 ± 1.9	596.4 ± 3.6	0.64 ± 0.1
	MiS1 2 µg	57.1 ± 2.0	595.9 ± 2.7	0.80 ± 0.03
	MiS1 4 µg	59.2 ± 0.7	597.3 ± 2.5	0.80 ± 0.1
	Mut 4 µg	63.1 ± 2.4	593.3 ± 6.7	0.63 ± 0.02

The data are expressed as mean ± SD in all groups (n = 5–8 mice/group). *p<0.05; **p<0.01; ****p<0.0001 vs. BTBR wild type.



Supplementary Figure 1: Presence of glomerular and interstitial inflammatory infiltrate in BTBR ob/ob mice.
Inflammatory infiltrate was quantified by immunostaining of monocytes/macrophages (F4/80+) and T lymphocytes (CD3+) both at the glomerular and interstitial fields. (**A**) Representative images of F4/80 monocytes/macrophages and CD3 T lymphocytes in BTBR WT and BTBR ob/ob mice. Magnification 200x and 630x. Graphs represent the quantification of average number of cells F4/80+ and CD3+, both at the glomerular and interstitial fields. Data is shown as scatter dot plots and box with min/max values of each group (n = 5–6 mice/group). *p<0.05; **p<0.01; ***p<0.001 ****p<0.0001 vs. BTBR WT control.



Supplementary Figure 2: Distribution of visceral fatty tissue and renomegaly in BTBR ob/ob.
(A) Photography showing the distribution of visceral fat observed in the BTBR ob/ob mouse of 12th weeks-old. (B) This photography shows the biometric analysis of the decapsulated kidneys of a BTBR wild type (left) and BTBR ob/ob (right) 12th week-old mouse. Together with the increase in renal weight (Figure 1B), the presence of renomegaly is evidenced.

Supplementary Figure 3: Pleiotropic effects of Mimetic SOCS1 (MiS1) peptide in experimental T2D