Table S1 Primers used in qRT-PCR

Gene	Primer Sequence 5’ to 3	
	Forward	Reverse
HIF-1α	5’-ATCCATGTGACCATGAGGAAATG	5’-TCGGCTAGTTAGGGTACACTTC
FTH	5’-CCATCCAATCGGTAGTAGCG	5’-AGAACTACCACCAGGACTCAGAGG
TFRC	5’-TCGTGAGGCTGGATCTCAAAA	5’-CCTTACTATACGCCACATAACCC
HO1	5’-AAGACTGCGTTCCTGCTCAAC	5’-AAAGCCCTACAGCAACTGTCG
GPX4	5’-GGCTTCGTGTGCATCGTCACC	5’-TTCACCACGCAGCCGTTCTTG
18s	5’-GTAACCCGTTGAACCCCATT	5’-AGAACTACCACCAGGACTCAGAGG

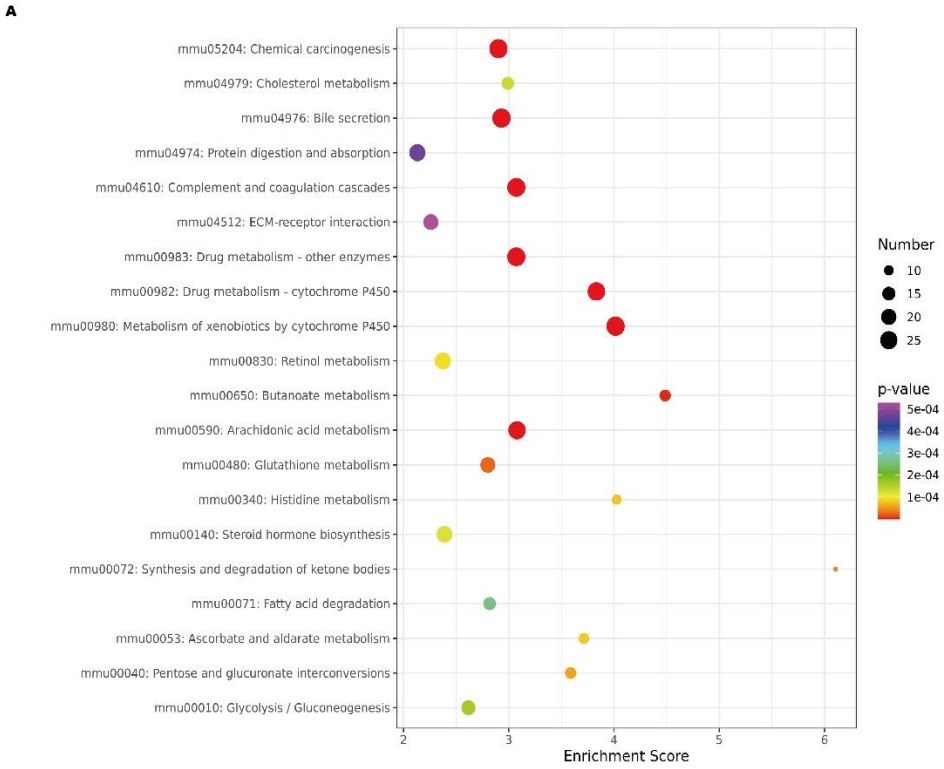
Table S2 General data of DKD patients

Parameters	DKD patients	Normal range
Number of patients	20	-
Age, years	52 ± 12.3	-
Gender, M/F	14/6	-
Proteinuria, g/24h	4.2 (2.8,7.1)	<0.15
Scr, μmol/L	248.7 (124.8,444,8)	44~133
BUN, mmol/L	14.3 (9.1,17.3)	2.86~7.14
eGFR, ml/min/1.73m^2	22.1 (12.3,41.3)	>90
FBG, mmol/L	6.5 (5.4,7.4)	3.9~6.1
HbA1c, %	6.8 (6.1,8.0)	4~6
Total cholesterol, mmol/L	4.9 (3.3,6.9)	2.33~5.17
Triglyceride, mmol/L	1.8 (1.3,2.3)	0.45~1.69
HDL-C, mmol/L	1.0 (0.9,1.2)	1.16~1.42(male) 1.29~1.55(female)
LDL-C, mmol/L	3.5 (2.0,4.4)	2.07~3.37
Percentage of glomerulosclerosis, %	36.0 (23.8,53.1)	-
IFTA score, grade 0/1/2/3	0/0/8/12	-

BUN, blood urea nitrogen; DKD, diabetic kidney disease; eGFR, estimated glomerular filtration rate; FBG, fasting blood glucose; HbA1c, hemoglobin A1c; HDL-C, high-density lipoprotein-cholesterol; IFTA, interstitial fibrosis and tubular atrophy; LDL-C, low-density lipoprotein-cholesterol; Scr, serum creatinine; TC, total cholesterol. The eGFR was calculated using the CKD-EPI equation. HbA1c levels

were measured using a high-performance liquid chromatographic assay. The continuous data were expressed as mean ± SD or median and IQR as appropriate.

Fig.S1 KEGG pathway enrichment of differentially expressed genes. KEGG pathway enrichment of differentially expressed genes between *m/m* mice and vehicle-treated *db/db* mice (**A**) and vehicle-treated and dapagliflozin-treated *db/db* mice (**B**).



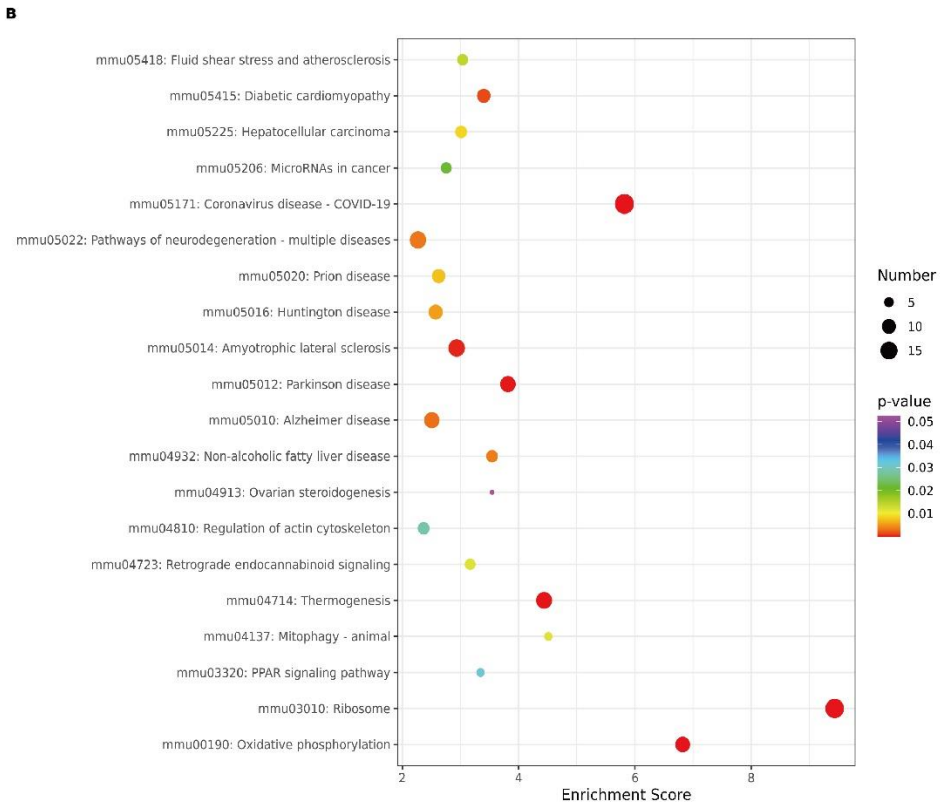


Fig.S2 The viability of HK-2 cells being cultured in the media with different treatments for 24h. Dapa, dapagliflozin. Data were expressed as mean ± SD. *p<0.05, **p<0.01, ***p<0.001.