

**Supplementary Table 4.** Sensitivity analysis

	MR analysis causal estimate	SD	T-stat	Main MR results P value	Global test	Global test P value
MR-presso						
VCAN-DKD	0.084	0.034	2.458	0.017	68.506	0.275
DKD-VCAN	0.015	0.016	0.957	0.341	112.609	0.143
Heierogeneity						
	Method	Q	Q_df	Q_P value		
VCAN-DKD	IVW	66.525	59.000	0.234		
DKD-VCAN	IVW	110.433	97.000	0.166		
Plciotropy						
	Egger_intercept	SE	P value			
VCAN-DKD	0.013	0.019	0.499			
DKD-VCAN	-0.003	0.010	0.807			

MR, Mendelian randomization; SD, standard deviation; VCAN, versican; DKD, diabetic kidney disease; Q, Cochran's q statistic; df, degrees of freedom; IVW, inverse variance weighting; SE, standard error.