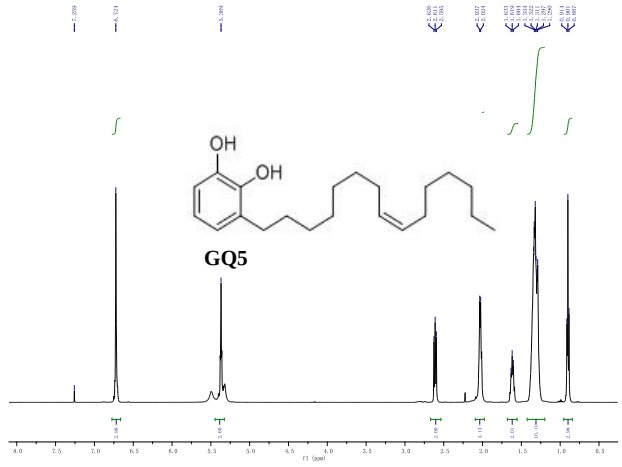
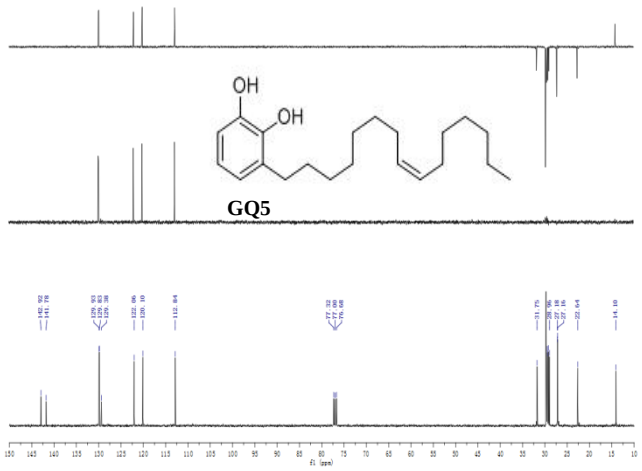
Supplementary Figure 1: ^{1}H NMR, ^{13}C NMR and DEPT spectra of GQ5

A



The ^{1}H NMR (500 MHz, CDCl3) spectrum of GQ5

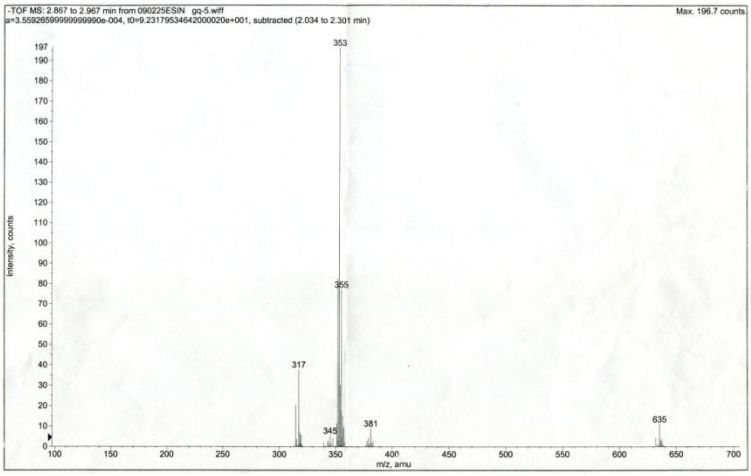
B



The ^{13}C NMR and DEPT (125 MHz, CDCl3) spectra of GQ5

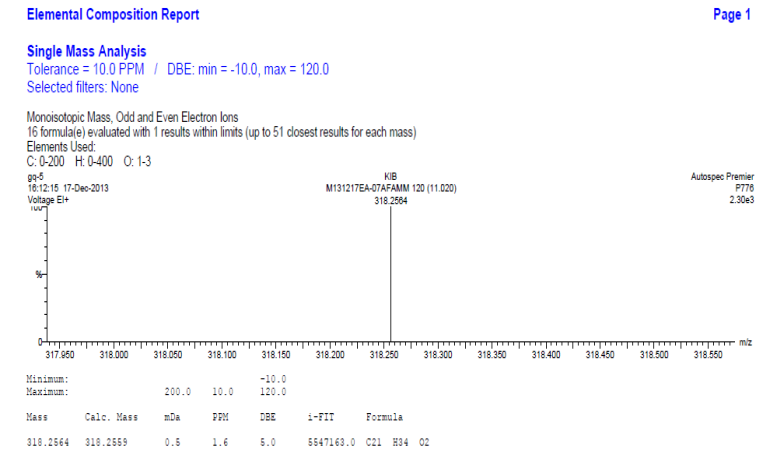
Supplementary Figure 2:Mass spectra and high resolution EI-MS of GQ5

A



Mass spectra (ESI-MS) of GQ5

B



Elemental Composition Report Page 1

Single Mass Analysis
Tolerance = 10.0 PPM / DBE: min = -10.0, max = 120.0
Selected filters: None

Monoisotopic Mass, Odd and Even Electron Ions
16 formula(e) evaluated with 1 results within limits (up to 51 closest results for each mass)
Elements Used:
C: 0-200 H: 0-400 O: 1-3

gq-5
16:12:15 17-Dec-2013
Voltage EI+

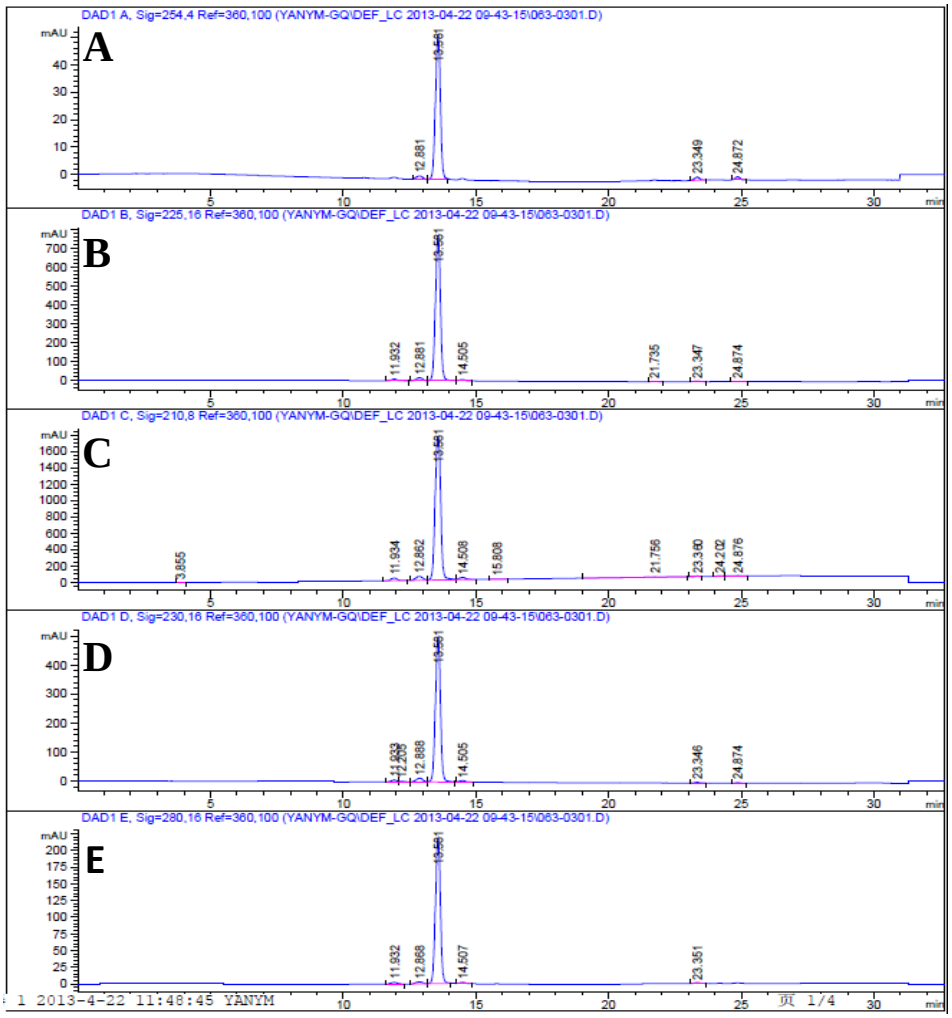
KIB
M131217EA-07AFAMM 120 (11.020)
318.2564

Autospec Premier
P776
2.30e3

Minimum:				-10.0		
Maximum:		200.0	10.0	120.0		
Mass	Calc. Mass	mDa	PPM	DBE	i-FIT	Formula
318.2564	318.2559	0.5	1.6	5.0	5547163.0	C21 H34 O2

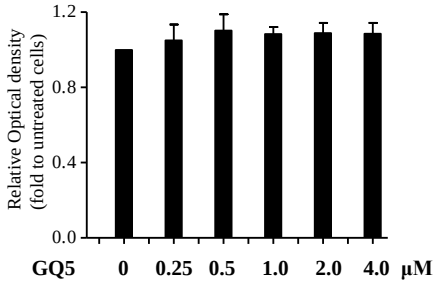
High resolution EI-MS of GQ5

Supplementary Figure 3: Determining the purity of GQ5 by HPLC



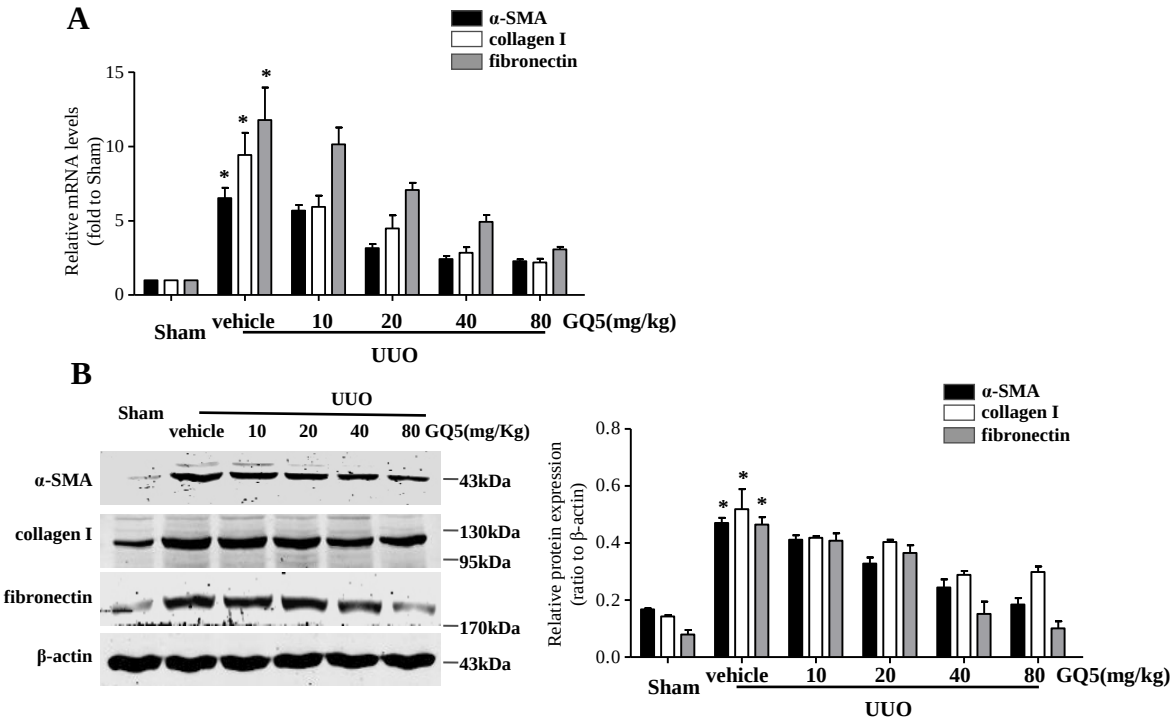
Stationary phase: column of 250mm × 4.6mm i.d., 5μm, Thermo Fisher Hypersil BDS; Mobile phase: gradient MeOH/H_2O, 85%-100%, 0-20 min; Flow rate: 1 mL/min; Detection: 254 nm (A); 225 nm (B); 210 nm (C); 230 nm (D); 280 nm (E).

Supplementary Figure 4: GQ5 did not affect the viability or proliferation of the cells



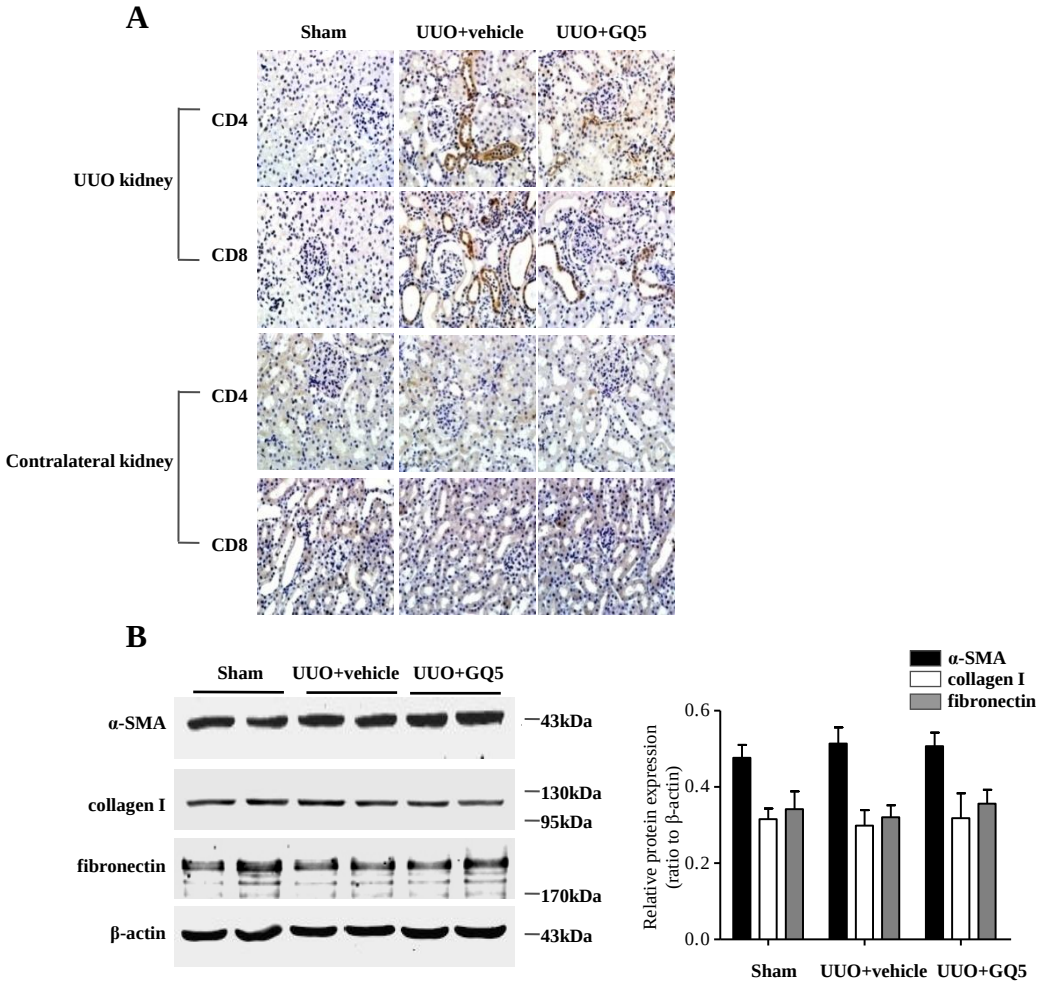
NRK 52E Cells were incubated with indicated amount of GQ5 for 1h. Cell viability was determined by MTT assay.

Supplementary Figure 5: GQ5 dose-dependently inhibited the expression of fibrotic genes in UUO kidneys



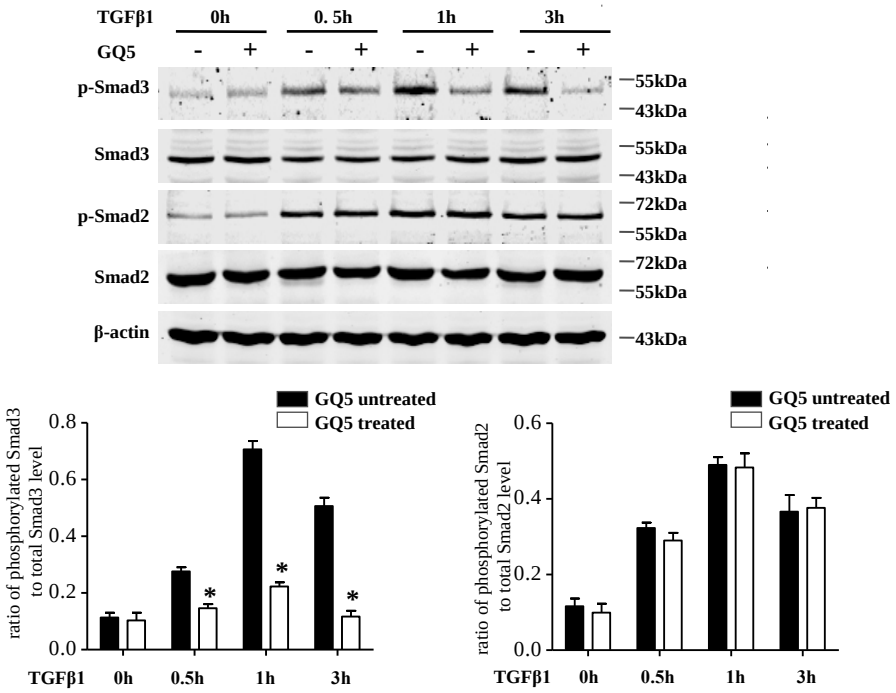
The indicated dosage of GQ5 was administrated right after operation *via* intraperitoneal injection. Rats were sacrificed at day 7 after UUO. Expression of α-SMA, collagen I and fibronectin was analyzed by Real-time PCR (A) and western blot (B). ANOVA, $p<0.05$ in GQ5 treated rats, n=5 in each group.

Supplementary Figure 6: Lymphocyte infiltration and fibrotic genes expression in UUO kidneys



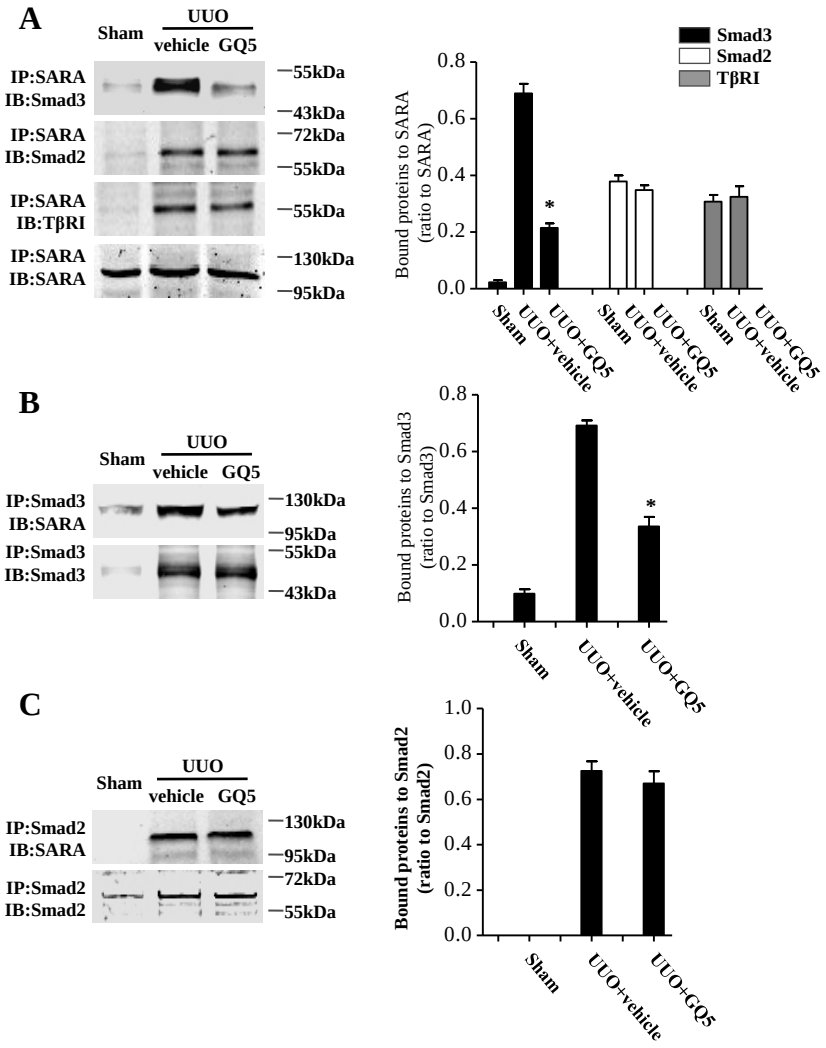
GQ5 (40mg/kg/d) was administrated right after operation *via* intraperitoneal injection. Rats were sacrificed at day 14 after UUO. (A): Kidney sections were stained by anti-CD4 and anti-CD8 antibodies in the obstructed and contralatral kidneys. (B): Expression of α-SMA, collagen I and fibronectin of the contralateral kidneys was analyzed Western blot.

Supplementary Figure 7: The effect of GQ5 on the time course of TGF-β1-induced phosphorylation of Smad2 and Smad3



NRK 52E Cells were pre-incubated with GQ5 (2.5μM) for 1h before TGF-β1 (10ng/ml) treatment. Cells were harvested at indicated period after TGF-β1 stimulation. Cell lysates were immunoblotted with antibodies against p-Smad3, p-Smad2, total Smad3 and total Smad2. Data were expressed as mean ± SD of three independent experiments. * $p<0.05$, *vs* GQ5 untreated cells with TGF-β1 stimulation.

Supplementary Figure 8: GQ5 Selectively Blocks the Interaction of Smad3 with SARA in UUO kidneys



Rats receiving daily intraperitoneal injection of vehicle or GQ5 (40mg/kg/d) were sacrificed 14 days after UUO. A: Kidney homogenates were immunoprecipitated with anti-SARA, followed by immunoblotting using antibodies against Smad3, Smad2, TβR1, and SARA. B: Kidney homogenates were immunoprecipitated with anti-Smad3, followed by immunoblotting using antibodies against SARA and Smad3. C: Kidney homogenates were immunoprecipitated with anti-Smad2, followed by immunoblotting using antibodies against SARA and Smad2. Data were expressed as mean ± SD of 6 rats. *$p<0.05$ *vs* vehicle treated UUO.

Supplemental Table 1: The NMR data of GQ5

position	δ_H (ppm, *J* in Hz)	δ_C
1		142.9
2		141.8
3		129.4
4	6.72, m	122.1
5	6.72, m	120.1
6	6.72, m	112.8
1'	2.61, t (7.5)	29.0
2'	1.62, m	29.2
3'−6'	1.32, m	29.5
7'	2.04, m	27.2
8'	5.37, m	129.8
9'	5.37, m	129.9
10'	2.04, m	27.2
11'	1.32, m	29.5
12'	1.32, m	29.5
13'	1.32, m	31.8
14'	1.32, m	22.6
15'	0.90, t (7.0)	14.1

Supplemental Table 2: The sequences of the primer pairs for real-time PCR

Primer	Sequerence
Rat collagen I	
forward	**5'-TGCCGTGACCTCAAGATGTG–3'**
reverse	**5'-CACAAGCGTGCTGTAGGTGA-3'**
Rat α-SMA	
forward	**5'-GATCACCATCGGGAATGAACGC-3'**
reverse	**5'-CTTAGAAGCATTTGCGGTGGAC-3'**
Rat fibronectin	
forward	**5' CGAAACCATGAACTTTCTGC 3'**
reverse	**5' CCTCAGTGGGCACACACTCC 3'**
Rat GAPDH	
forward	**5'-TCCGCCCCTTCCGCTGATG-3'**
reverse	**5'-CACGGAAGGCCATGCCAGTGA-3'**