

**Hypoglycemic activity *in vitro* and *vivo* of a water-soluble polysaccharide from  
*Astragalus membranaceus***

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**Table S1.** Pearson correlation analysis of oxidative stress and diabetes related symptoms.

		SOD		CAT		MDA		GSH	
		r	P	r	P	r	P	r	P
Blood glucose	FBG	-0.896	0.001	-0.901	0.001	0.788	0.012	-0.786	0.012
	GSP	-0.885	0.002	-0.899	0.001	0.571	0.108	-0.862	0.003
	AUC-OGTT	-0.946	0.000	-0.956	0.000	0.727	0.026	-0.927	0.000
	FINS	-0.929	0.000	-0.933	0.000	0.672	0.047	0.938	0.000
	HOMA-IR	-0.986	0.000	-0.968	0.000	0.793	0.011	-0.902	0.001
Blood lipid	TC	-0.889	0.001	-0.893	0.001	0.843	0.004	-0.885	0.002
	TG	-0.946	0.000	-0.939	0.000	0.832	0.005	-0.855	0.003
	LDL-C	-0.940	0.000	-0.940	0.000	0.900	0.001	-0.922	0.000
	HDL-C	0.939	0.000	0.947	0.000	-0.845	0.004	0.933	0.000
Liver- related parameters	Liver index	-0.948	0.000	-0.952	0.000	0.799	0.010	-0.852	0.004
	AST	-0.865	0.003	-0.841	0.004	0.716	0.030	-0.857	0.003
	ALT	-0.795	0.010	-0.797	0.010	0.743	0.022	-0.768	0.016
	Hepatic glycogen	0.902	0.001	0.925	0.000	-0.947	0.000	0.856	0.003
	TC	-0.943	0.000	-0.916	0.001	0.732	0.025	-0.806	0.009
	TG	-0.952	0.000	-0.950	0.000	0.834	0.005	-0.868	0.002

**Supplementary Figure Captions:**

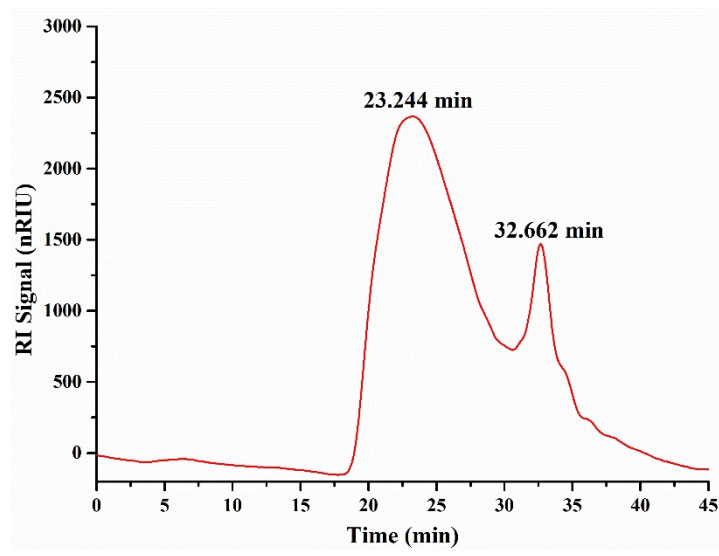
**Fig. S1.** The HPGPC chromatogram of AMP.

**Fig. S2.** The ion chromatograms of (A) standard monosaccharides and (B) AMP hydrolysate.

**Fig. S3.** AMP improved the symptoms of T2DM mice. (A-B) Body weight, (C-D) food consumption, and (E-F) water consumption curves of experimental mice were measured throughout the 6-weeks period and at week 6. Data were presented as means  $\pm$  SEM. \*\*\* $P < 0.001$ ; ns, not statistically significant.

**Fig. S4.** The following indicators included (A) ALT and (B) AST in liver of experimental mice were analyzed after AMP administration for 6 weeks. Data were presented as means  $\pm$  SEM. \*  $P < 0.05$ , \*\* $P < 0.01$ , \*\*\* $P < 0.001$ .

**Fig. S1.**



**Fig. S2.**

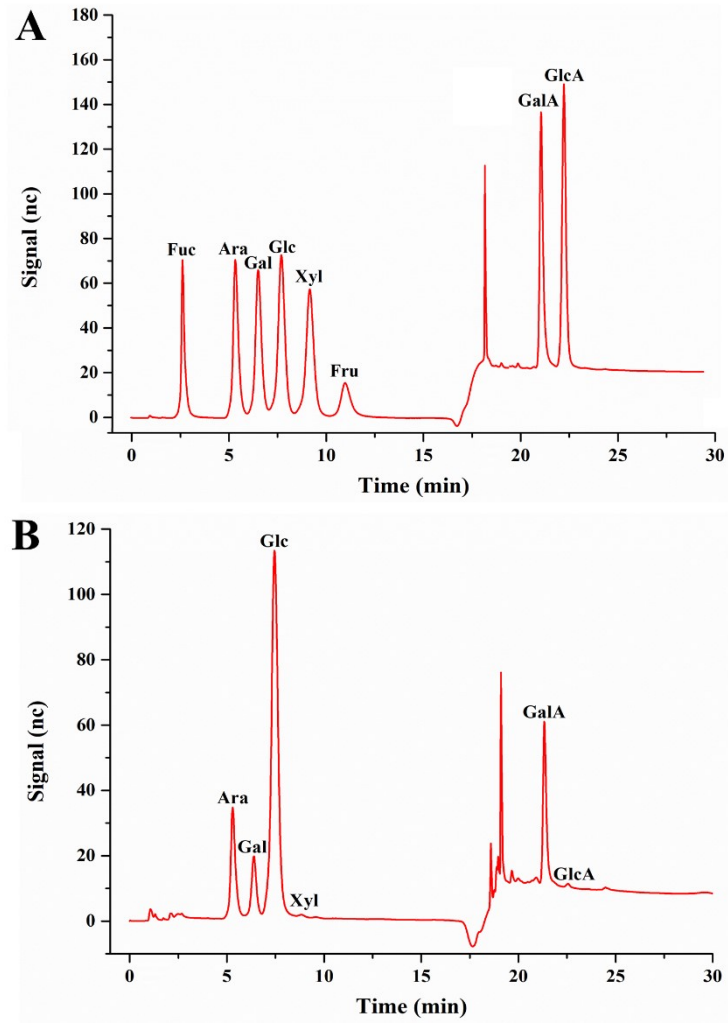
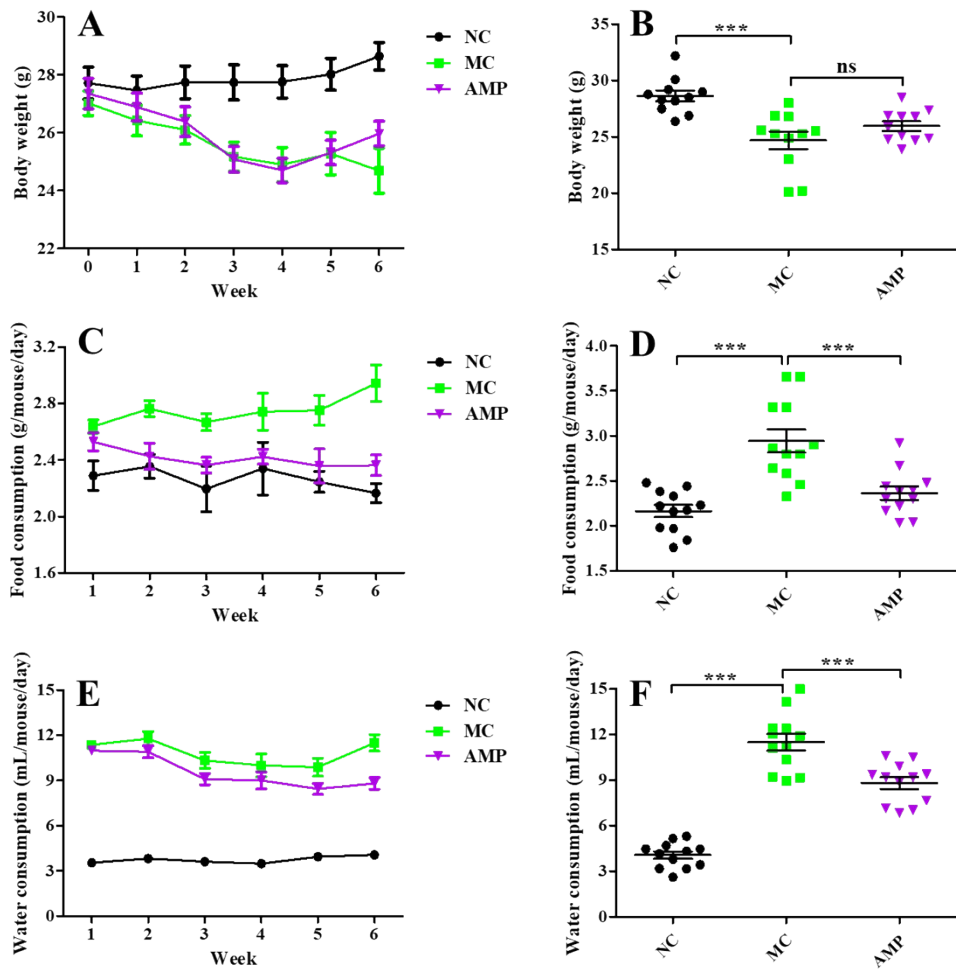


Fig. S3.



**Fig. S4.**

