Electronic Supplementary Material (ESI) for Analytical Methods.

Supporting Information for

Development of a sensitive and reliable enzyme-linked immunosorbent assay for detecting naringin in human saliva

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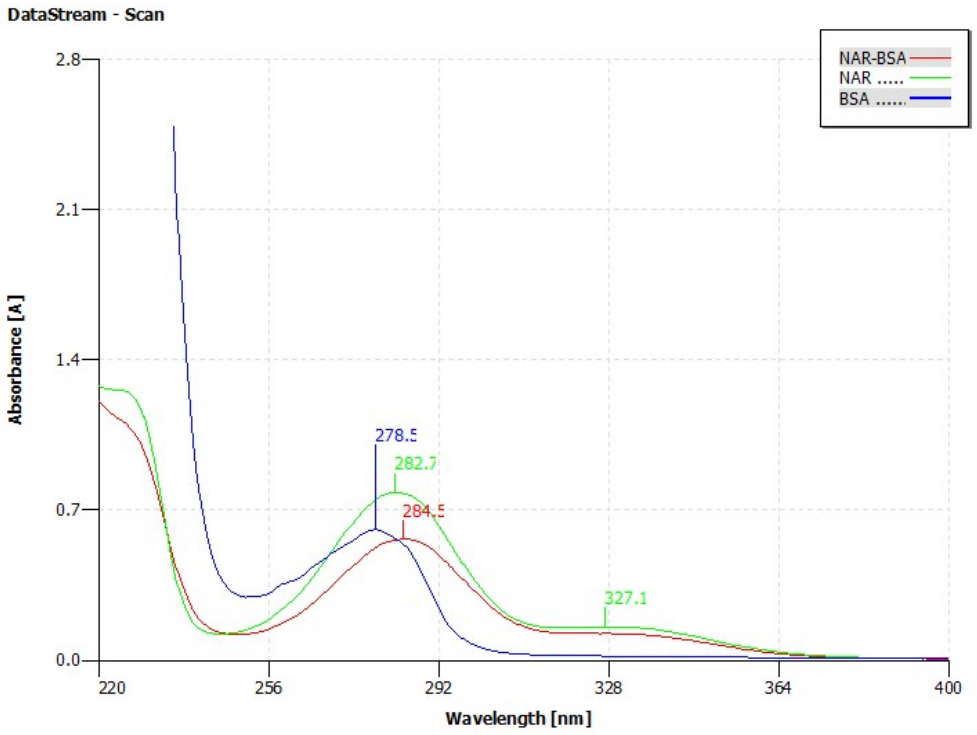


Figure S1. Absorbance spectrum for NAR, BSA, and NAR-BSA. With the UV approach, the characteristic spectra of Nar (1μg/mL), BSA (1mg/mL), Nar–BSA (1mg/mL), were simultaneously analyzed.

Tables

Table S1. Total concentration of NAR in various TCM as determined by ELISA

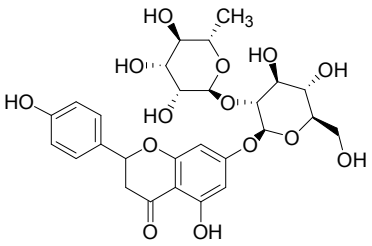
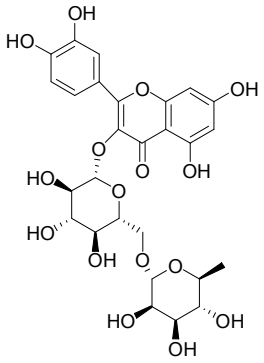
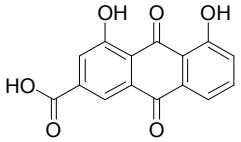
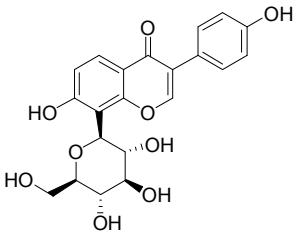
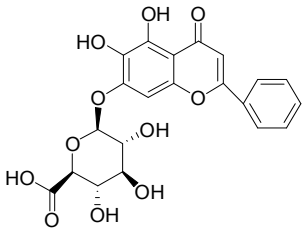
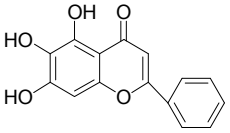
TCM prescription	ELISA Content(μg mg^{-1})	Composition ratio	Composition of TCM prescription
Zhishi Shaoyao San	3.72±0.21	50%	Fructus Aurantii Immaturus 4.5g, Radix Paeoniae 4.5g.
Zhizhu San	7.22±0.45	50%	Fructus Aurantii Immaturus 9g, Rhizoma Atractylodis Macrocephalae 9g
Zhishi Xiebai Guizhi Tang	0.92±0.03	27%	Fructus Aurantii Immaturus 12g, Cortex Magnoliae Officinalis 12g, Bulbus Allii Macrostemonis9g, Ramulus Cinnamomi 6g, Fructus Trichosanthis 12g
Zhixiong San	4.88±0.26	40%	Fructus Aurantii Immaturus 15g, Rhizoma Chuanxiong15g, Radix Glycyrrhizae Praeparata7.5 g
Sini San	0.94±0.06	25%	Citrus aurantium 6g, Radix Paeoniae Alba 6g. Radix Glycyrrhizae Praeparata 6g, Radix Bupleuri 6g,
Zhishixiaopi Wan	0.20±0.01	17%	Rhizoma Zingberis Recens 6g, Radix Glycyrrhizae Praeparata 6g,Mai Ya Qu6g, Poria 6g, Rhizoma Atractylodis Macrocephalae 6g, Ban Xia Qu12g, Radix Ginseng 12g, Cortex Magnoliae Officinalis 12g, Fructus Aurantii Immaturus 15g, Rhizoma Coptidis 15g
Chaihushugan San	0.15±0.02	14%	Pericarpium Citri Reticulatae 6g, Radix Bupleuri 6g, Rhizoma Chuanxiong 4.5g, Citrus aurantii 4.5g, Radix Paeoniae Alba 4.5g, Radix Glycyrrhizae Praeparata 1.5g, Rhizoma Cyperi 4.5g.
Xuefuzhuyu Tang	0.88±0.02	7.70%	Radix Angelicae Sinensis 9g, Radix Rehmanniae 9g, Semen Persicae 12g, Flos Carthami 9g, Citrus aurantii 6g, Radix Paeoniae Rubra 6g, Radix Bupleuri 3g, Radix Glycyrrhizae Praeparata 6g, Rhizoma Chuanxiong 4.5g, Radix Platycodonis 4.5g, Radix Achyranthis bidentatae 9g

Banxiaxiexin Tang	0	nd	Rhizoma Pinelliae 9g, Radix Scutellariae 6g, Rhizoma Coptidis 3g, Rhizoma Zingiberis 6g, Radix Ginseng 6g, Radix Glycyrrhizae Praeparata 6g, Fructus Ziziphi Jujubae 4 Pcs

Concentration of NAR in various TCM prescriptions as determined by ELISA.

All data are mean±SD from six wells analyzed from each sample.

Table S2. Cross-reactivities (%) of anti-Nar MAb against NAR and its related compounds

Cross-reactivity (%)	
	
NAR 100%	Rutin 1.83%
	
Rheinic acid 0.31%	Puerarin 52.5%
	
Baicalin <0.09%	Baicalein 1.37%

Cross-reactivity (%) = [(quantity of NAR that inhibits antibody binding by 50%)/(quantity of cross-reactive compound that inhibits antibody binding by 50%)] *100%. The values are the mean of three replicates.

Table S3 Cross-reactivities (%) of anti-Nar MAb against NAR and crude extract

Crude extract	Cross-reactivity (%)	Crude extract	Cross-reactivity (%)
Radix Ginseng	<0.09%	Radix Angelicae Sinensis	<0.09%
Radix Puerariae	<0.09%	Radix Kansui	<0.09%
Radix Knoxiae	<0.09%	Radix Platycodonis	<0.09%
Fructus Evodiae	<0.09%	Radix Ophiopogonis	<0.09%
Cortex Magnolia Officindis	<0.09%	Radix Phytolaccae	<0.09%
Cortex Phellodendri	<0.09%	Radix Asparagi	<0.09%
Cortex Fraxini	<0.09%	Radix Pulsatillae	<0.09%
Flos Genkwa	<0.09%	Radix Astragali	<0.09%
Fructus Gardeniae	<0.09%	Radix Arctii	<0.09%
Fructus Aurantii Immaturus	100%	Radix Aconite Lateralis Preparata	<0.09%
Fructus Trichosanthis	<0.09%	Radix Glycyrrhizae	<0.09%
Fructus Schisandrae Chinensis	<0.09%	Radix Et Rhizoma Rhei	0.2%
Fructus Crotonis	<0.09%	Radix Vladimiriae Ramulus Cinnamomi	<0.09%
Herba Artemisiae Scopariae	<0.09%	Rhizome Pinelliae	<0.09%
Herba Andrographis	<0.09%	Rhizome Coptidis	<0.09%
Medulla Tetrapanacis	<0.09%	Herba Asari	<0.09%
Polyporus	<0.09%	Rhizome Alismatis	<0.09%
Radix Paeoniae Alba	<0.09%	Rhizome Anemarrhenae	<0.09%
FlosInulae	<0.09%	Rhizome Cimicifugae	<0.09%
Radix Scutellariae	<0.09%	Rhizome Curcuma Longae	<0.09%

Radix Bupleuri	<0.09%	Semen Lepidii, Semen Descurainiae	<0.09%
Radix Angelicae Sinensis	<0.09%	Semen Armeniacae Amarum	<0.09%

Table S4. Contents of GC in four samples of *Glycyrrhiza uralensis* as determined by ELISA \and HPLC

Content of NAR (μg/mL)				
sample	ELISA	CV%	HPLC	CV%
1	66.79±1.10	0.16	65.43±1.71	2.55
2	47.49±1.23	0.26	45.61±1.51	3.18
3	19.69±1.52	0.77	18.33±0.81	2.82
4	36.18±3.73	1.03	34.9±1.02	4.13