Supplementary file of

A SARS-CoV-2 M^{pro} Fluorescent Sensor for Exploring the Pharmacodynamic Substances from Traditional Chinese Medicine

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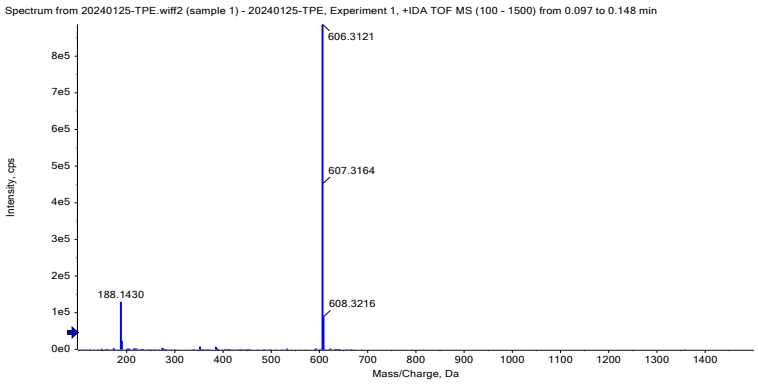

Figure S1. The MS fragment of TPE-Ph-In.

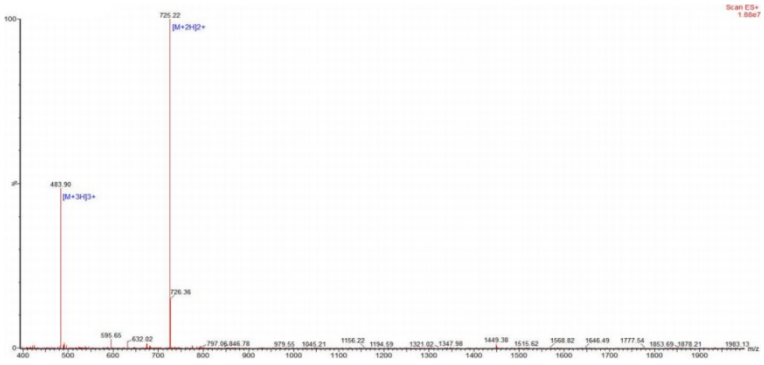

Figure S2. The MS fragment of the substrate (S-TLG).

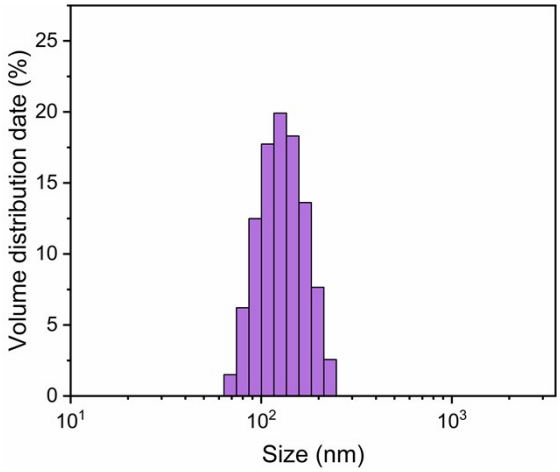

Figure S3. The hydrodynamic size of TPE-Ph-In determined by DLS.

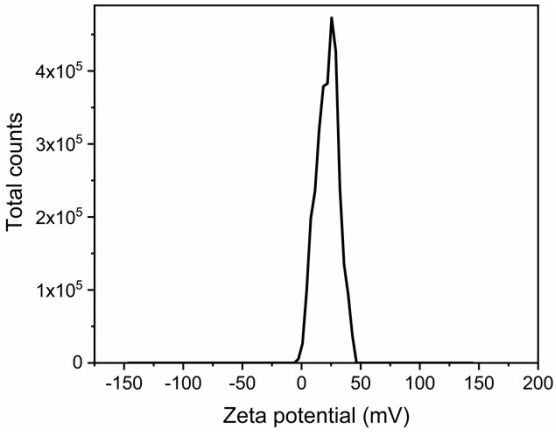

Figure S4. The Zeta potential of TPE-Ph-In.

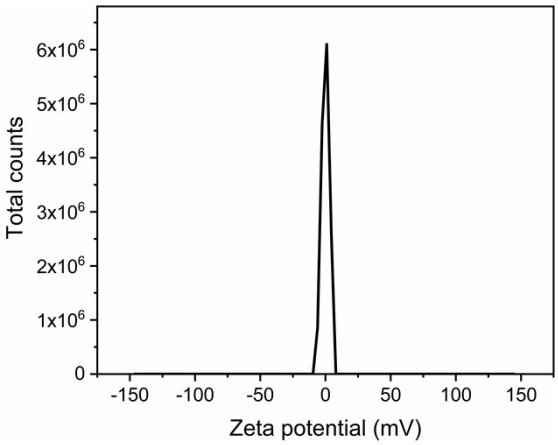

Figure S5. The Zeta potential of S-TLG.

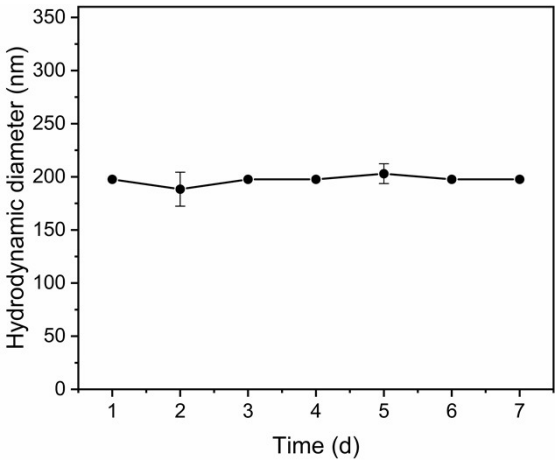

Figure S6. The hydrodynamic diameter of the TPE-S-TLG sensor during seven days.

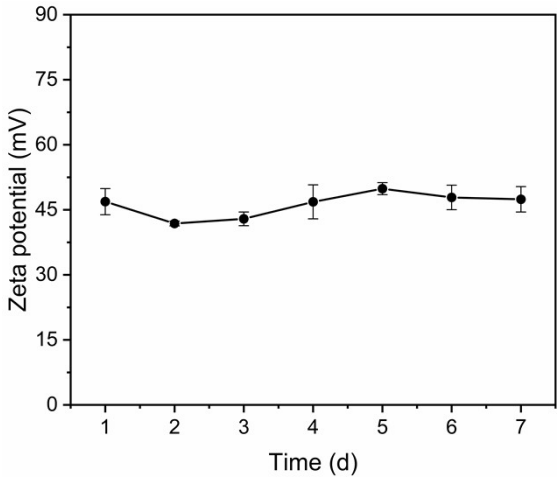

Figure S7. The zeta potential of the TPE-S-TLG sensor during seven days.

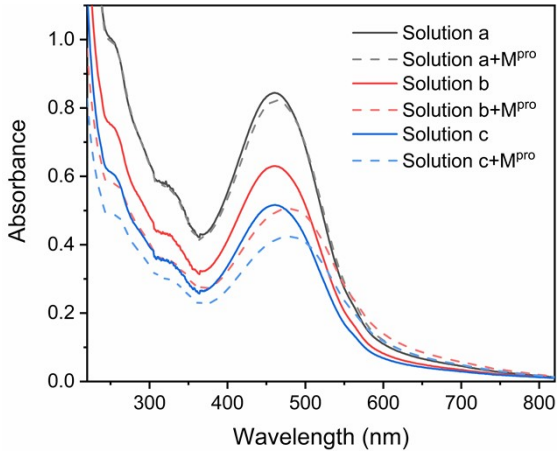

Figure S8. Influence of different reaction systems on M^{pro} detection (a: buffer:sensor = 2:3； b: buffer:sensor = 1:1； c: buffer:sensor = 3:2).

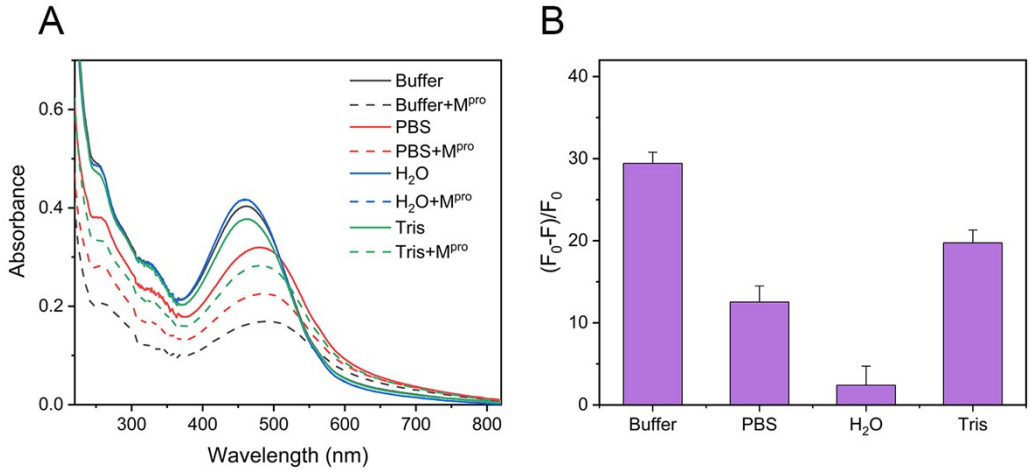

Figure S9. Influence of different reaction solutions on M^{pro} detection.

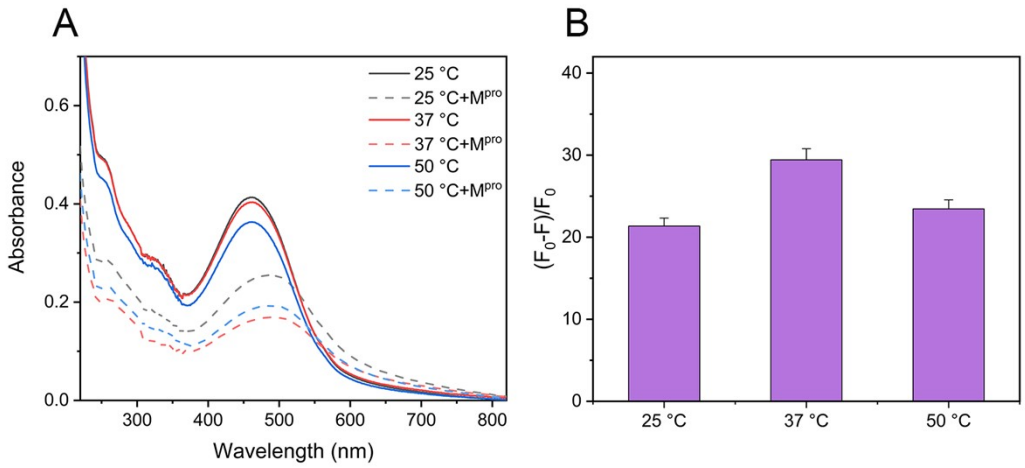

Figure S10. Influence of different reaction temperature on M^{pro} detection.

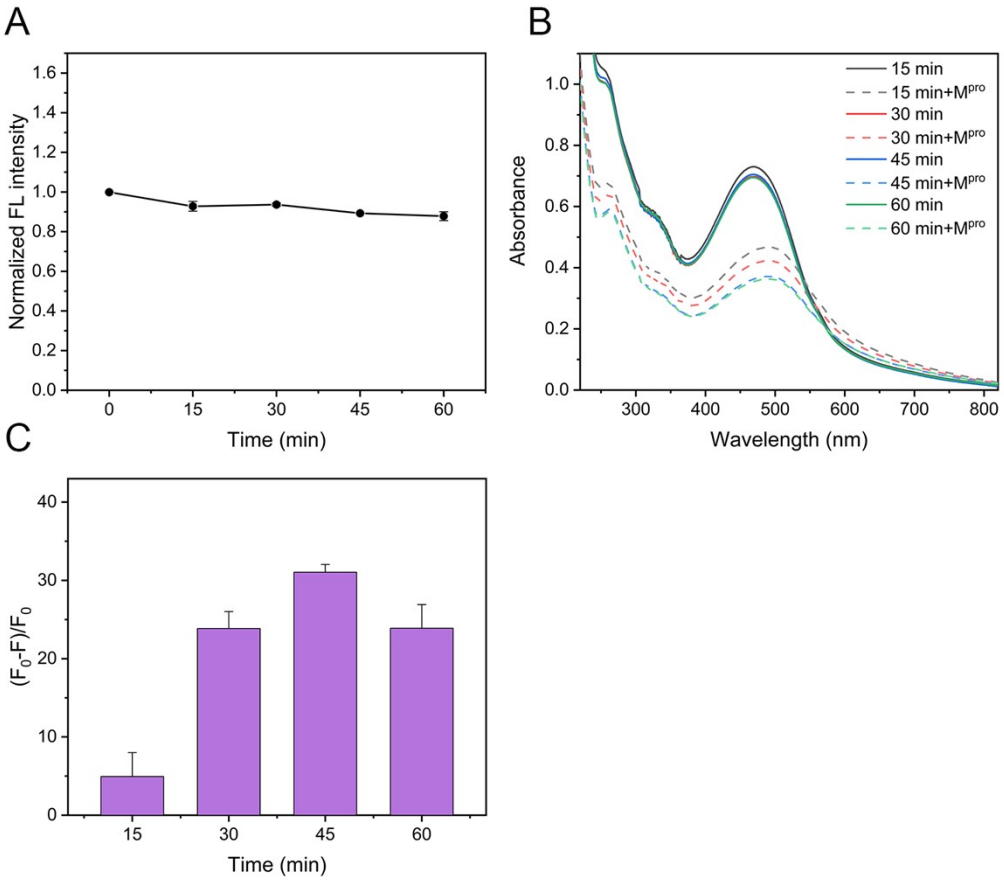

Figure S11. Influence of different reaction time on (A) the TPE-S-TLG sensor and (B/C) M^{pro} detection.

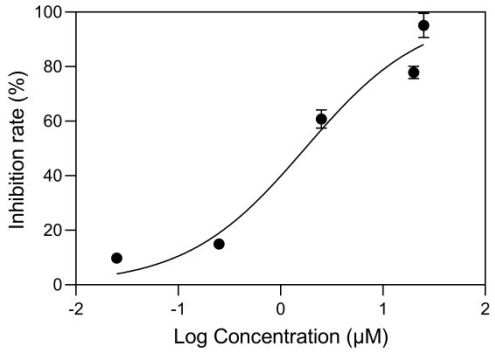

Figure S12. The inhibitory activity of ebselen on the SARS-CoV-2 M^{pro}.

Table S1. The IC_{50} of ebselen and Xuebijing injection on M^{pro}.

Drug	IC_{50}	R^2
Ebselen	1.735 μM	0.9651
XBJ injection	44.09 (dilution ratio)	0.9895

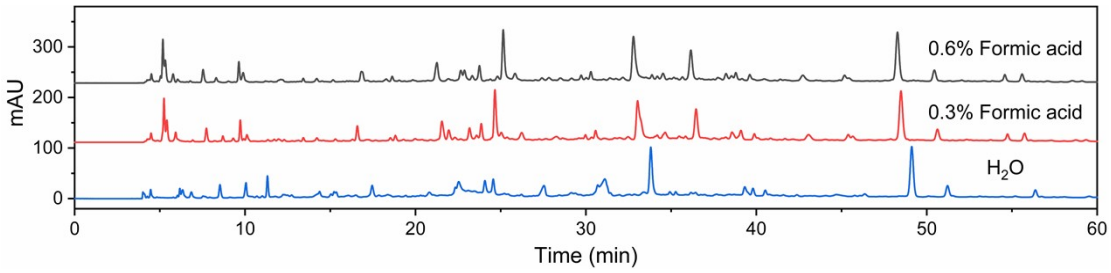

Figure S13. Effect of different mobile phases on separation of Xuebijing injection.

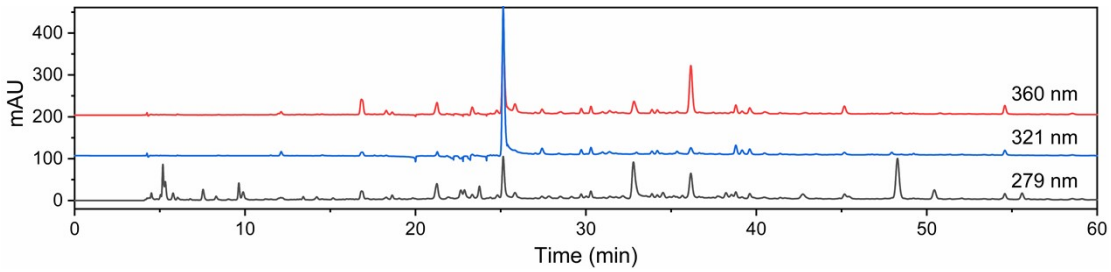

Figure S14. HPLC chromatograms of the Xuebijing injection at different wavelengths.

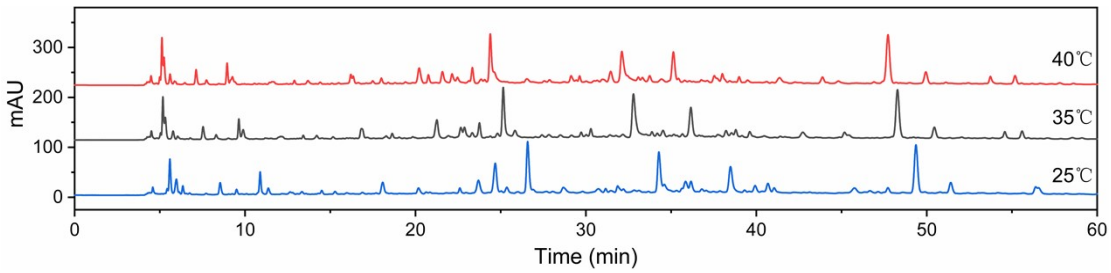

Figure S15. Effect of column temperature on the separation of Xuebijing injection.

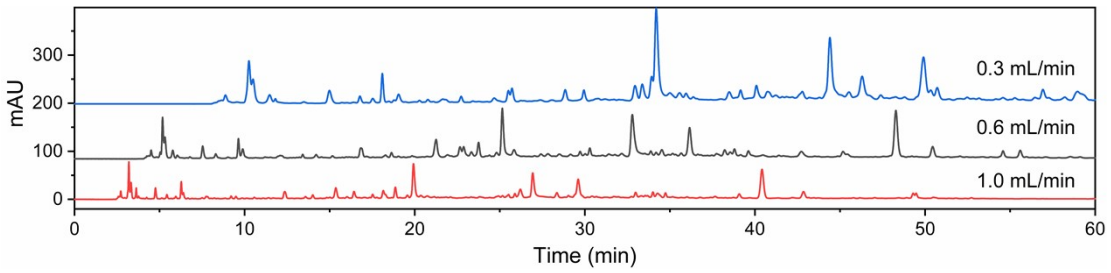

Figure S16. HPLC chromatograms of Xuebijing injection under different flow rate conditions.

Table S2. Time program of the gradient elution in HPLC.

Time (min)	A%	B%
0	2	98
26	16	84
30	19	81
38	22	78
48	30	70
60	33	67

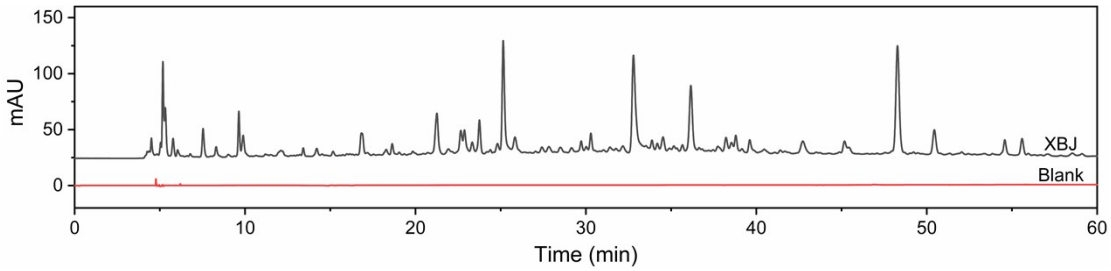

Figure S17. Typical HPLC chromatograms of blank solvent and Xuebijing injection.

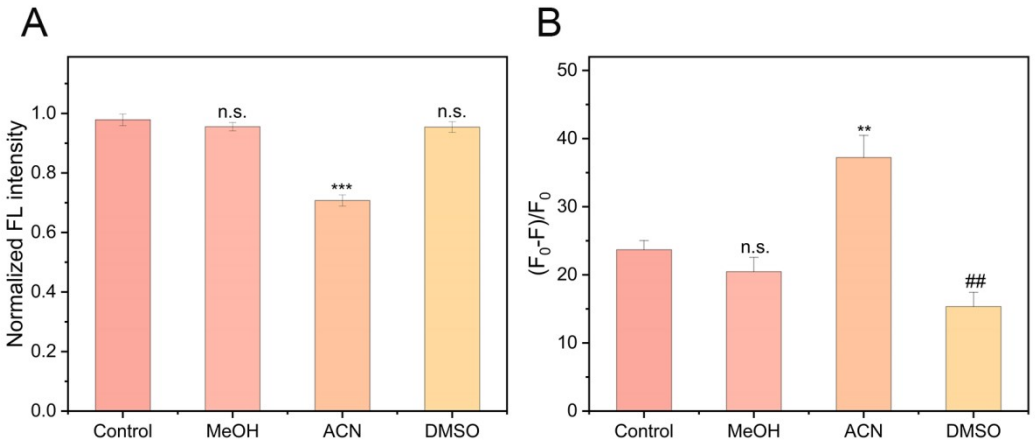

Figure S18. The impact of organic solvents on (A) the TPE-S-TLG sensor and (B) SARS-CoV-2 M^{pro} (Data are means ± SD, the values relative to the control groups, n = 3, ** $p < 0.01$ and *** $p < 0.001$).

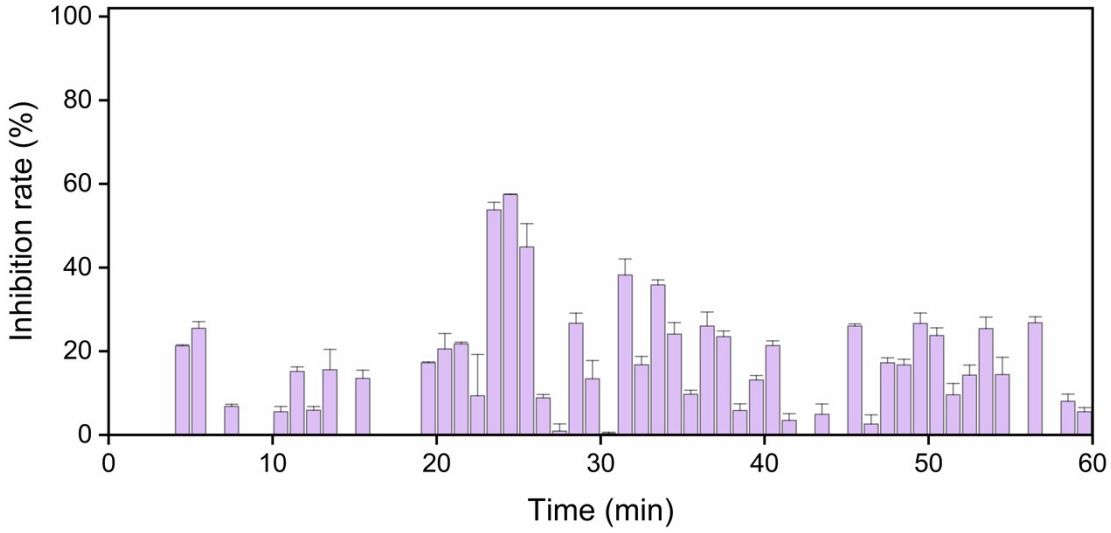

Figure S19. The inhibitory activity of Xuebijing injection fractions on SARS-CoV-2 M^{pro}.

Table S3. Compounds identified from Xuebijing injection.

No.	Identification	RT (min)	Formula	Found at Mass	ion	ppm	MS/MS Fragmentation ions
1	Sucrose	2.132	$C_{12}H_{22}O_{11}$	341.1083	$[M-H]^-$	-1.8	179.0556$[M-H-C_6H_{10}O_5]^-$
2	8-Debenzoylpaeoniflorgenin	3.561	$C_{16}H_{24}O_{10}$	421.1344	$[M+HCOO]^-$	-0.4	375.1279$[M-H]^-$; 345.1173$[M-H-CH_2O]^-$; 195.0655$[M-H-Glc]^-$; 165.0551$[M-H-Glc-CH_2O]^-$
3	Uridine	3.674	$C_9H_{12}N_2O_6$	243.0618	$[M-H]^-$	-1.8	200.0568$[M-H-CONH]^-$; 110.0247$[M-H-C_5H_9O_4]^-$
4	Ribonolactone	4.198	$C_5H_8O_5$	147.0296	$[M-H]^-$	-2.0	129.0186$[M-H-H_2O]^-$;

No.	Identification	RT (min)	Formula	Found at Mass	ion	ppm	MS/MS Fragmentation ions
5	Gallic acid	4.892	$C_7H_6O_5$	169.0141	$[M-H]^-$	-1.1	103.0391$[M-H-CO_2]^-$; 87.0083$[M-H-C_2H_4O_2]^-$; 85.0293$[M-H-H_2O-CO_2]^-$; 57.0344$[M-H-C_3H_6O_3]^-$ 125.0241$[M-H-CO_2]^-$; 107.0128$[M-H-CO_2-H_2O]^-$
6	β-Glucogallin	5.024	$C_{13}H_{16}O_{10}$	331.0668	$[M-H]^-$	-0.8	271.0451$[M-H-C_2H_4O_2]^-$; 211.0239$[M-H-2C_2H_4O_2]^-$; 169.0136$[M-H-C_6H_{10}O_5]^-$
7	Guanosine	5.050	$C_{10}H_{13}N_5O_5$	282.0839	$[M-H]^-$	-1.6	150.0418$[M-H-C_5H_8O_4]^-$
8	1'-*O*-Galloylsucrose	8.746	$C_{19}H_{26}O_{15}$	493.1194	$[M-H]^-$	-1.1	313.0560$[M-H-C_6H_{12}O_6]^-$; 283.0455$[M-H-C_6H_{12}O_6-CH_2O]^-$; 169.0144$[M-H-C_{12}H_{20}O_{10}]^-$
9	Tanshinol	10.585	$C_9H_{10}O_5$	197.0454	$[M-H]^-$	-0.7	179.0342$[M-H-H_2O]^-$; 135.0446$[M-H_2O-COOH]^-$; 123.0442$[M-CH_3O_3]^-$
10	6'-*O*-Galloylsucrose isomer	11.575	$C_{19}H_{26}O_{15}$	493.1194	$[M-H]^-$	-1.0	313.0556$[M-H-C_6H_{12}O_6]^-$; 169.0131$[M-H-C_{12}H_{20}O_{10}]^-$
11	3-Caffeoylquinic	14.464	$C_{16}H_{18}O_9$	353.0873	$[M-H]^-$	-1.4	191.0556$[M-H-C_9H_6O_3]^-$; 179.0345$[M-H-C_7H_{10}O_5]^-$; 135.0452$[M-H-C_8H_{10}O_7]^-$
12	Protocatechualdehyde	14.788	$C_7H_6O_3$	137.0242	$[M-H]^-$	-1.6	109.0287$[M-H-CO]^-$; 108.0212$[M-H-CHO]^-$; 91.0188$[M-H-CH_2O_2]^-$
13	6-O-Galloyl-desbenzoylpaeoniflorin Isomer	14.988	$C_{23}H_{28}O_{14}$	527.1395	$[M-H]^-$	-2.1	497.1282$[M-CH_2OH]^-$; 479.1193$[M-CH_2OH-H_2O]^-$; 313.0566$[M-C_{10}H_{14}O_5]^-$; 169.0148$[M-C_{16}H_{22}O_9]^-$
14	Mudanpioside F	15.146	$C_{16}H_{24}O_8$	389.1447	$[M+HCOO]^-$	-1.6	343.1398$[M-H]^-$; 181.0867$[M-H-C_6H_{10}O_5]^-$; 163.0764$[M-H-C_6H_{10}O_5-H_2O]^-$; 151,0763$[M-H-C_6H_{10}O_5-CH_2O]^-$
15	Aspalathin	15.186	$C_{21}H_{24}O_{11}$	451.1242	$[M-H]^-$	-0.9	289.0709$[M-H-C_6H_{10}O_5]^-$; 245.0805$[M-H-C_8H_{14}O_6]^-$; 179.0364$[M-H-C_{11}H_{12}O_5]^-$
16	6-O-Galloyl-desbenzoylpaeoniflorin	15.800	$C_{23}H_{28}O_{14}$	527.1397	$[M-H]^-$	-1.7	481.2304$[M-H-CH_2O-H_2O]^-$; 313.0568$[M-H-C_9H_{10}O_6]^-$; 271.0474$[M-H-C_9H_{10}O_6-C_2H_2O]^-$; 169.0144$[M-H-C_{16}H_{22}O_9]^-$
17	Catechin	16.533	$C_{15}H_{14}O_6$	289.0712	$[M-H]^-$	-1.9	245.0812$[M-H-CO_2]^-$; 203.0701$[M-H-H_2O-C_3O_2]^-$;

No.	Identification	RT (min)	Formula	Found at Mass	ion	ppm	MS/MS Fragmentation ions
18	Oxypaeoniflorin	16.819	$C_{23}H_{28}O_{12}$	495.1500	$[M-H]^-$	-0.1	179.0341$[M-H-C_6H_6O_2]^-$; 151.0392$[M-H-C_6H_6O_2-CO_2]^-$; 137.0235$[M-C_8H_8O_3]^-$ 465.1398$[M-H-CH_2O]^-$; 333.0988$[M-H-Glc]^-$; 195.0662$[M-H-Glc-C_7H_6O_3]^-$; 177.0556$[M-H-Glc-C_7H_6O_3-H_2O]^-$; 165.0560$[M-H-Glc-C_7H_6O_3-CH_2O]^-$; 137.0241$[M-H-Glc-C_7H_6O_3-CH_2O-C_2H_4]^-$
19	Chlorogenic acid	16.935	$C_{16}H_{18}O_9$	353.0875	$[M-H]^-$	-1.4	191.0556$[M-H-C_9H_6O_3]^-$
20	Caffeic acid	17.923	$C_9H_8O_4$	179.0347	$[M-H]^-$	-1.5	135.0446$[M-H-CO_2]^-$; 117.0335$[M-H-CO_2-H_2O]^-$
21	Safflochalconeside isomer	18.147	$C_{21}H_{20}O_{10}$	433.1139	$[M+H]^+$	2.1	415.1050$[M+H-H_2O]^+$; 385.0894$[M+H-H_2O-CH_2O]^+$; 367.0827$[M+H-2H_2O-CH_2O]^+$; 355.0828$[M+H-H_2O-C_2H_4O_2]^+$; 235.0244$[M+H-H_2O-C_2H_4O_2-C_8H_8O]^+$
22	Safflor yellow A	18.174	$C_{27}H_{30}O_{15}$	595.1673	$[M+H]^+$	2.6	577.1584$[M+H-H_2O]^+$; 433.1137$[M+H-C_6H_{10}O_5]^+$; 147.0442$[M+H-C_6H_{10}O_5-C_{12}H_{14}O_8]^+$
23	Carthamidin/isocarthamidin-2glu/gal	18.201	$C_{27}H_{32}O_{16}$	613.1760	$[M+H]^+$	-0.5	451.1218$[M+H-C_9H_6O_3]^+$; 331.0801$[M+H-C_7H_{10}O_5-C_6H_4O_2]^+$; 289.0702$[M+H-C_7H_{10}O_5-C_6H_4O_2-C_2H_2O]^+$
24	Hydroxysafor yellow A	18.220	$C_{27}H_{32}O_{16}$	611.1608	$[M-H]^-$	-1.6	491.1176$[M-H-C_4H_8O_4]^-$; 473.1076$[M-H-C_4H_8O_4-H_2O]^-$; 421.1130$[M-H-C_4H_8O_4-C_2H_2O-CO]^-$; 403.1021$[M-H-C_6H_{10}O_5-H_2O-CO]^-$; 353.0654$[M-H-2C_4H_8O_4-H_2O]^-$; 325.0708$[M-H-2C_4H_8O_4-H_2O-CO]^-$; 295.0611$[M-H-C_4H_8O_4-C2H_2O-CO-C_3H_6O_3-2H_2O]^-$; 283.0612$[M-H-2C_4H_8O_4-C_2H_2O-CO-H_2O]^-$
25	Carthamidin/isocarthamidin-glu/gal isomer	18.248	$C_{21}H_{22}O_{11}$	451.1239	$[M+H]^+$	0.8	289.0706$[M+H-C_9H_6O_3]^+$; 211.0232$[M+H-C_8H_5O_3-H_2O-CO-CH_3OH]^+$
26	4-(β-D-Glucopyranosyloxy)-3-hydroxybenzy	19.395	$C_{20}H_{22}O_{11}$	437.1084	$[M-H]^-$	-1.2	299.0502$[M-H-C_7H_6O_3]^-$; 178.9982$[M-H-C_7H_6O_3-C_4H_9O_4]^-$

No.	Identification	RT (min)	Formula	Found at Mass	ion	ppm	MS/MS Fragmentation ions
	l-3,4-dihydroxybenzoate						
27	Paeonol	20.395	$C_9H_{10}O_3$	167.0706	$[M+H]^+$	1.9	149.0583$[M+H-H_2O]^+$; 121.0645$[M+H-H_2O-CO]^+$
28	Albiflorin	21.714	$C_{23}H_{28}O_{11}$	525.1604	$[M+HCOO]^-$	-1.9	479.1549$[M-H]^-$; 357.1171$[M-H-C_6H_5COOH]^-$; 121.0289$[M-H-C_{16}H_{21}O_9]^-$
29	Isomaltopaeoniflorin	22.012	$C_{29}H_{38}O_{16}$	687.2133	$[M-HCOO]^-$	-1.3	611.1951$[M-H]^-$; 593.1876$[M-H-CH_2O-H_2O]^-$; 283.0823$[M-H-C_{12}H_{20}O_{11}-H_2O]^-$; 121.0288$[M-H-C_{22}H_{32}O_{14}]^-$
30	Khelloside	22.376	$C_{19}H_{20}O_{10}$	407.0976	$[M-H]^-$	-1.9	287.0532$[M-H-C_4H_8O_4]^-$; 187.0392$[M-H-C_8H_{12}O_6]^-$; 119.0495$[M-H-C_{15}H_{12}O_6]^-$
31	Lactiflorin	23.571	$C_{23}H_{26}O_{10}$	463.1615	$[M+H]^+$	3.6	151.0755$[M+H-2H_2O-C_7H_{11}O_2-C_8H_5O_3]^+$; 123.0802$[M+H-2H_2O-C_7H_{11}O_2-C_8H_5O_3-CO]^+$; 105.0692$[M+H-3H_2O-C_7H_{11}O_2-C_8H_5O_3-CO]^+$
32	Paeoniflorin	23.620	$C_{23}H_{28}O_{11}$	525.1600	$[M+HCOO]^-$	-2.6	479.1540$[M-H]^-$; 449.1429$[M-H-CH_2O]^-$; 327.1073$[M-H-CH_2O-C_6H_5COOH]^-$; 165.0552$[M-H-C_{15}H_{21}O_7]^-$; 121.0284$[M-H-C_{16}H_{21}O_9]^-$
33	Ferulic acid	25.805	$C_{10}H_{10}O_4$	195.0654	$[M+H]^+$	1.2	177.0547$[M+H-H_2O]^+$; 135.0475$[M+H-CH_2-CO-H_2O]^+$
34	Rutin isomer	26.208	$C_{27}H_{30}O_{16}$	611.1620	$[M+H]^+$	2.1	303.0508$[M+H-C_{12}H_{20}O_9]^+$; 287.0550$[M+H-C_{12}H_{20}O_{10}]^+$
35	Luteolin	26.255	$C_{15}H_{10}O_6$	287.0551	$[M+H]^+$	0.4	153.0179$[M+H-C_8H_6O_2]^+$; 135.0437$[M+H-C_8H_6O_2-H_2O]^+$
36	Rutin	27.776	$C_{27}H_{30}O_{16}$	611.1619	$[M+H]^+$	2.1	303.0495$[M+H-C_{12}H_{20}O_9]^+$; 153.0187$[M+H-C_{20}H_{26}O_5]^+$
37	Isopaeoniflorin	28.596	$C_{23}H_{28}O_{11}$	525.1603	$[M+HCOO]^-$	-1.9	479.1542$[M-H]^-$; 449.1464$[M-H-CH_2O]^-$; 327.1076 $[M-H-CH_2O-C_6H_5COOH]^-$; 165.0572$[M-H-C_{15}H_{21}O_7]^-$; 121.0295$[M-H-C_{16}H_{21}O_9]^-$
38	Hyperin	28.764	$C_{21}H_{20}O_{12}$	465.1041	$[M+H]^+$	3.0	303.0501$[M+H-C_6H_{10}O_5]^+$; 153.0198$[M+H-C_6H_{10}O_5-C_7H_2O_4]^+$
39	Quercetin	28.827	$C_{15}H_{10}O_7$	303.0506	$[M+H]^+$	2.3	285.0405$[M+H-H_2O]^+$; 257.0481$[M+H-H_2O-CO]^+$;

No.	Identification	RT (min)	Formula	Found at Mass	ion	ppm	MS/MS Fragmentation ions
40	Isoquercitrin	28.883	$C_{21}H_{20}O_{12}$	463.0876	$[M-H]^-$	-1.3	229.0512$[M+H-H_2O-2CO]^+$; 201.0631$[M+H-H_2O-3CO]^+$; 165.0190$[M+H-CO-C_6H_6O_2]^+$ 301.0349$[M-H-C_6H_{10}O_5]^-$; 255.0302$[M-H-C_6H_{10}O_5-CH_2O_2]^-$; 151.0036$[M-H-C_6H_{10}O_5-C_7H_6O_2-CO]^-$
41	Galloylpaeoniflorin isomer	30.044	$C_{30}H_{32}O_{15}$	631.1654	$[M-H]^-$	-2.3	613.1651$[M-H-H_2O]^-$; 491.1197$[M-H-H_2O-C_7H_6O_2]^-$; 313.0559$[M-H-H_2O-C_7H_6O_2-C_{10}H_{10}O_3]^-$; 169.0140$[M-H-H_2O-C_7H_6O_2-C_{10}H_{10}O_3-C_6H_6O_4]^-$
42	Kaempferol	31.792	$C_{15}H_{10}O_6$	287.0552	$[M+H]^+$	0.7	153.0184$[M+H-C_8H_6O_2]^+$
43	Kaempferol-3-O-rutinoside	31.857	$C_{27}H_{30}O_{15}$	593.1501	$[M-H]^-$	-1.8	285.0404$[M-H-C_6H_{10}O_5-C_6H_{10}O_4]^-$
44	Pentagalloylglucose	32.359	$C_{41}H_{32}O_{26}$	939.1094	$[M-H]^-$	-1.7	769.0825$[M-H-C_7H_6O_5]^-$
45	Isochlorogenic acid C	32.462	$C_{25}H_{24}O_{12}$	515.1191	$[M-H]^-$	-0.8	353.0867$[M-H-C_9H_6O_3]^-$; 191.0560$[M-H-2C_9H_6O_3]^-$; 173.0450$[M-H-2C_9H_6O_3-H_2O]^-$
46	Galuteolin	32.813	$C_{21}H_{20}O_{11}$	447.0931	$[M-H]^-$	-0.4	285.0404$[M-H-C_6H_{10}O_5]^-$; 255.0289$[M-H-C_6H_{10}O_5-CH_2O]^-$
47	Acetoxypaeoniflorin	33.383	$C_{25}H_{30}O_{12}$	567.1710	$[M+HCOO]^-$	-1.6	521.1677$[M-H]^-$; 491.1547$[M-H-CH_2O]^-$; 369.1208$[M-H-CH_2O-C_7H_6O_2]^-$; 165.0553$[M-H-CH_2O-C_7H_6O_2-C_8H_{12}O_6]^-$; 121.0293$[M-H-C_{17}H_{14}O_6-C_3H_2O_2]^-$
48	Rosmarinic acid	36.426	$C_{18}H_{16}O_8$	359.0765	$[M-H]^-$	-2	197.0448$[M-H-C_9H_6O_3]^-$; 179.0343$[M-H-C_9H_8O_4]^-$; 161.0237$[M-H-C_9H_{10}O_5]^-$
49	Senkyunolide F isomer	36.456	$C_{12}H_{14}O_3$	207.1014	$[M+H]^+$	-1.0	189.0907$[M+H-H_2O]^+$; 161.0960$[M+H-H_2O-CO]^+$
50	Senkyunolide I/H	36.493	$C_{12}H_{16}O_4$	225.1124	$[M+H]^+$	1.3	207.1020$[M+H-H_2O]^+$; 189.0901$[M+H-2H_2O]^+$; 165.0917$[M+H-2H_2O-CO]^+$
51	Salvianolic acid A	37.958	$C_{26}H_{22}O_{10}$	493.1135	$[M-H]^-$	-1.1	295.0607$[M-H-C_9H_{10}O_5]^-$; 185.0237$[M-H-C_9H_{10}O_5-C_6H_6O_2]^-$; 179.0348$[M-H-C_{17}H_{14}O_6]^-$; 109.0299$[M-H-C_{17}H_{14}O_6-C_3H_2O_2]^-$
52	Bis-PEG8-acid	39.699	$C_{20}H_{38}O_{12}$	469.2286	$[M-H]^-$	-0.9	423.2221$[M-H-CH_2O_2]^-$; 277.1648$[M-H-CH_2O_2-C_6H_{10}O_4]^-$
53	Litseaefolosid e C	39.994	$C_{30}H_{30}O_{14}$	613.1548	$[M-H]^-$	-2.5	361.1080$[M-H-C_{12}H_{12}O_6]^-$; 241.0494$[M-H-C_{16}H_{20}O_{10}]^-$

No.	Identification	RT (min)	Formula	Found at Mass	ion	ppm	MS/MS Fragmentation ions
54	Mudanpioside C	40.589	$C_{30}H_{32}O_{13}$	599.1757	$[M-H]^-$	-2.2	477.1388$[M-H-C_7H_6O_2]^-$; 447.1293$[M-H-C_7H_6O_2-CH_2O]^-$; 281.0654$[M-H-C_{17}H_{18}O_6]^-$; 239.0560$[M-H-C_{19}H_{20}O_7]^-$; 137.0231$[M-H-C_{23}H_{26}O_{10}]^-$; 121.0289$[M-H-C_{23}H_{26}O_{11}]^-$
55	Salvianolic acid B	41.006	$C_{36}H_{30}O_{16}$	717.1443	$[M-H]^-$	-2.5	519.0919$[M-H-C_9H_{10}O_5]^-$; 321.0404$[M-H-2C_9H_{10}O_5]^-$
56	4-Allyl-2-methoxyphenyl 6-O-β-D-glucopyranosyl-β-D-glucopyranoside	42.209	$C_{22}H_{32}O_{12}$	487.1810	$[M-H]^-$	-2.2	369.1645$[M-H-C_4H_6O_4]^-$; 173.0452$[M-H-C_{15}H_{22}O_7]^-$
57	Geranyl 6-O-α-L-arabinopyranosyl- β-D-glucopyranoside	44.011	$C_{21}H_{36}O_{10}$	447.2229	$[M-H]^-$	-1.5	315.1797$[M-H-C_5H_8O_4]^-$; 161.0443$[M-H-C_{15}H_{26}O_5]^-$
58	Salvianolic acid C	47.722	$C_{26}H_{20}O_{10}$	491.0978	$[M-H]^-$	-1.2	311.0563$[M-H-C_9H_8O_4]^-$; 135.0448$[M-H-C_{18}H_{12}O_8]^-$
59	Ethyl ferulate	48.341	$C_{12}H_{14}O_4$	221.0817	$[M-H]^-$	-1.1	177.0915$[M-H-C_2H_4O]^-$
60	Benzoylpaeoniflorin	50.465	$C_{30}H_{32}O_{12}$	629.1864	$[M+HCOO]^-$	-1.9	583.1807$[M-H]^-$; 553.1699$[M-H-CH_2O]^-$; 535.1604$[M-H-CH_2O-H_2O]^-$; 431.1345$[M-H-CH_2O-C_7H_6O_2]^-$; 121.0289$[M-H-C_{23}H_{26}O_{10}]^-$; 77.0396$[M-H-C_{22}H_{26}O_{10}-CO]^-$
61	Butylidenephthalide isomer	55.081	$C_{12}H_{12}O_2$	189.0908	$[M+H]^+$	-1.0	161.0949$[M+H-CO]^+$; 147.0442$[M+H-C_3H_6]^+$; 143.0862$[M+H-H_2O-CO]^+$; 133.0289$[M+H-C_4H_8]^+$

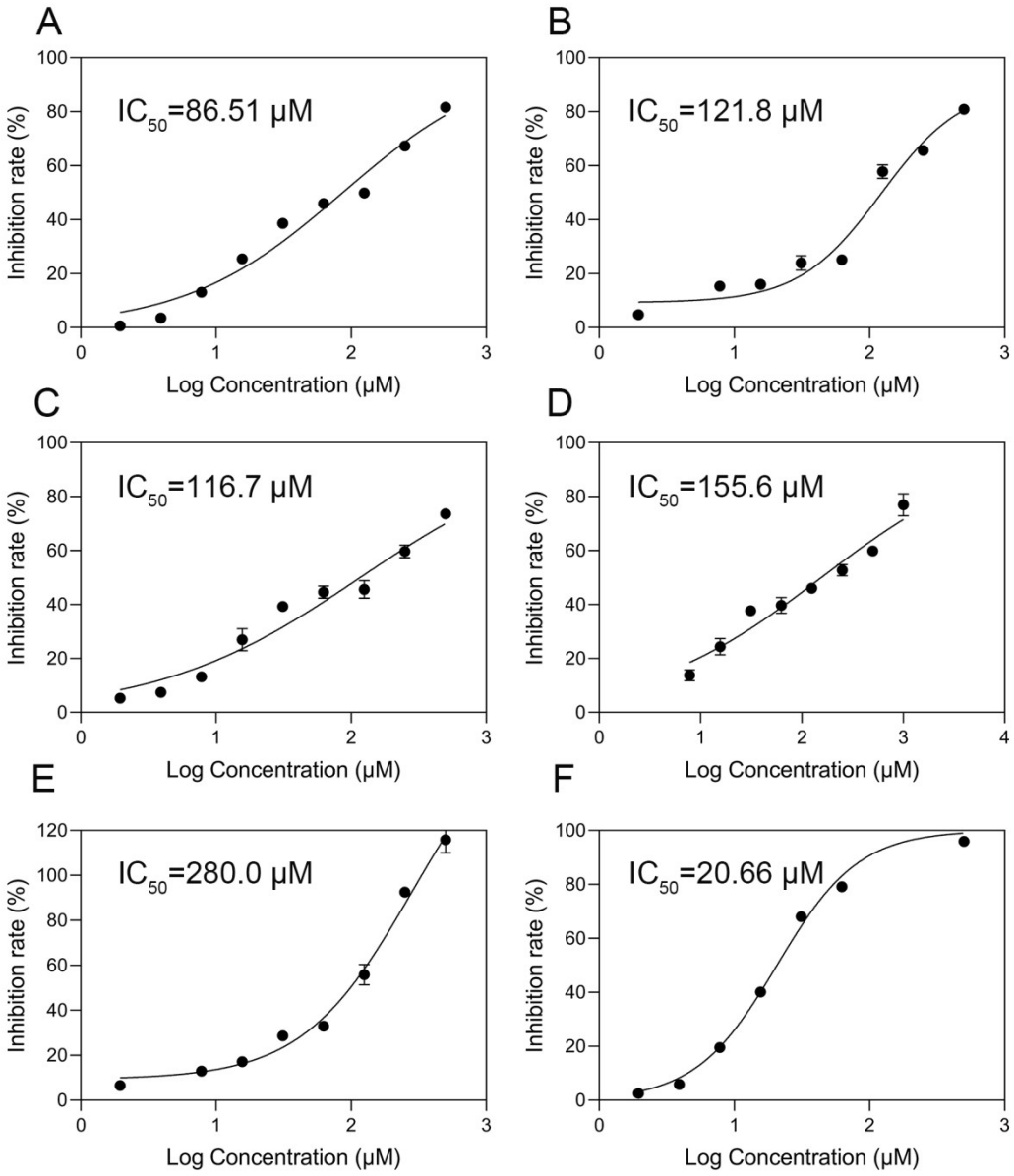

Figure S20. The inhibitory activity of protocatechualdehyde (A), chlorogenic acid (B), hydroxysafflower yellow A (C), caffeic acid (D), isoquercetin (E) and pentagalloylglucose (F) on SARS-CoV-2 M^{pro}. Data represent means ± SD (n=3).

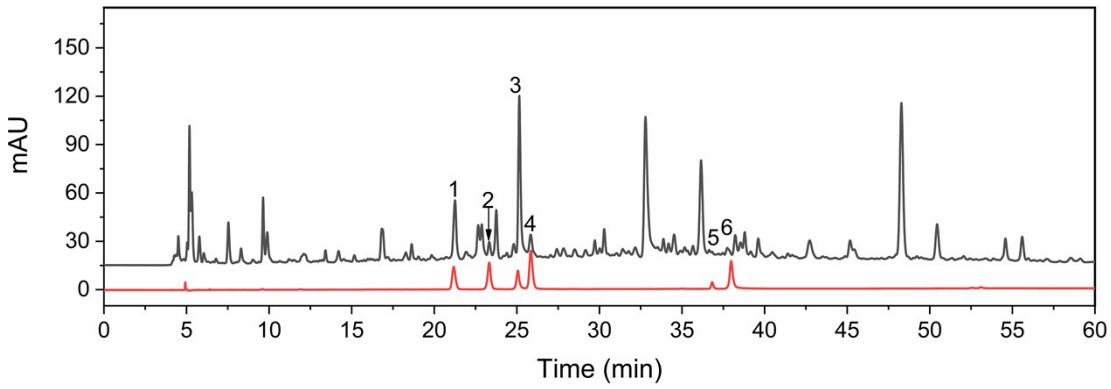

Figure S21. Typical HPLC chromatograms of 6 compounds and Xuebijing injection.

Table S4. The linear regression equation, linear range, LOD and LOQ of the six compounds.

Compounds	Regression equation	Linear range (μg/mL)	R^2	LOD (μg/mL)	LOQ (μg/mL)
Protocatechualdehyde	y=0.73699x+0.45696	0.095-95	0.9991	0.03	0.10
Chlorogenic acid	y=0.23438x+0.4459	0.34-340	0.9992	0.11	0.34
Hydroxysafflor yellow A	y=0.04143x+0.28217	1.22-1220	0.9991	0.41	1.22
Caffeic acid	y=0.36148x+0.66671	0.31-310	0.9990	0.10	0.31
Isoquercitrin	y=0.11826x+0.09762	0.25-125	0.9990	0.08	0.25
Pentagalloylglucose	y=0.3856x+0.0579	0.27-270	0.9999	0.09	0.27

Table S5. The intra-day, inter-day precision and stability of six compounds.

Compounds	Concentration (μg/mL)	Intra-day		Inter-day		Stability	
		RSD (%)	Accuracy (%)	RSD (%)	Accuracy (%)	RSD (%)	Accuracy (%)
Protocatechualdehyde	47.5	0.31	102.77	1.53	103.70	0.28	102.97
	0.76	0.32	100.93	0.51	100.75	0.23	100.85
	0.19	0.68	102.65	1.36	101.86	1.25	101.31
Chlorogenic acid	170	0.65	103.36	0.63	103.36	1.04	103.62
	2.72	0.19	100.42	0.42	100.59	0.19	100.42
	0.68	0.48	99.12	1.50	99.32	1.37	98.15
Hydroxysafflor yellow A	610	0.48	102.77	0.37	102.71	0.27	102.47

	9.76	0.58	99.53	0.91	98.87	0.60	99.59
	2.44	1.76	104.33	1.71	102.13	2.47	99.72
	155	0.56	103.93	0.45	103.67	1.20	103.89
Caffeic acid	2.48	0.26	100.93	1.13	100.67	0.26	100.93
	0.62	0.77	100.88	2.16	99.73	1.12	98.10
	62.5	0.41	103.10	0.44	103.23	0.81	102.40
Isoquercitrin	1.00	1.38	101.21	1.88	103.13	1.38	101.31
	0.25	1.89	98.72	0.64	98.27	1.45	97.48
	143.5	0.19	101.51	0.74	101.13	0.38	100.32
Pentagalloylglucose	2.16	0.77	104.85	0.31	104.77	1.03	104.13
	0.54	1.80	98.48	1.75	98.32	1.71	98.98

Table S6. The reproducibility of six compounds of Xuebijing injection.

Compounds	Concentration (μg/mL)	RSD (%)
Protocatechualdehyde	11.06	0.03
Chlorogenic acid	2.67	1.91
Hydroxysafflor yellow A	430.82	0.03
Caffeic acid	4.89	0.15
Isoquercitrin	1.24	0.82
Pentagalloylglucose	2.18	0.26

Table S7. The recovery of six compounds in fingerprints of Xuebijing injection.

Compounds	Original (μg)	Spiked (μg)	Found (μg)	Average recovery (%)	RSD (%)
		8.85	20.10	102.21	1.73
Protocatechualdehyde	11.06	11.06	21.87	97.78	0.24
		13.27	24.10	98.26	0.92
		2.14	4.85	101.87	1.71
Chlorogenic acid	2.67	2.67	5.34	100.30	0.66
		3.21	5.95	102.15	2.63

		344.66	765.19	97.01	1.41
Hydroxysafflor yellow A	430.82	430.82	854.92	98.44	0.70
		516.99	934.78	97.48	0.72
		3.91	8.80	99.95	0.43
Caffeic acid	4.89	4.89	9.93	103.07	0.74
		5.87	10.66	98.88	0.21
		0.99	2.23	100.43	0.48
Isoquercitrin	1.24	1.24	2.45	97.66	1.54
		1.49	2.69	97.46	1.69
		1.75	3.99	103.03	0.20
Pentagalloylglucose	2.18	2.18	4.34	98.71	0.71
		2.62	4.88	101.71	0.75