

Development of chemiluminescence enzyme immunoassay (CLEIA) for the determination of chlorogenic acid in pharmaceutical products

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Table S-1 Table 1 Chromatographic conditions for gradient elution of CGA

Time/min	Mobile phase A/%	Mobile phase B/%
0	90	10
5	90	10
18	60	40
18.5	20	80
20	20	80
21	90	10
25	90	10

Note: Mobile phase A was 0.1% phosphoric acid and Mobile phase B was acetonitrile.

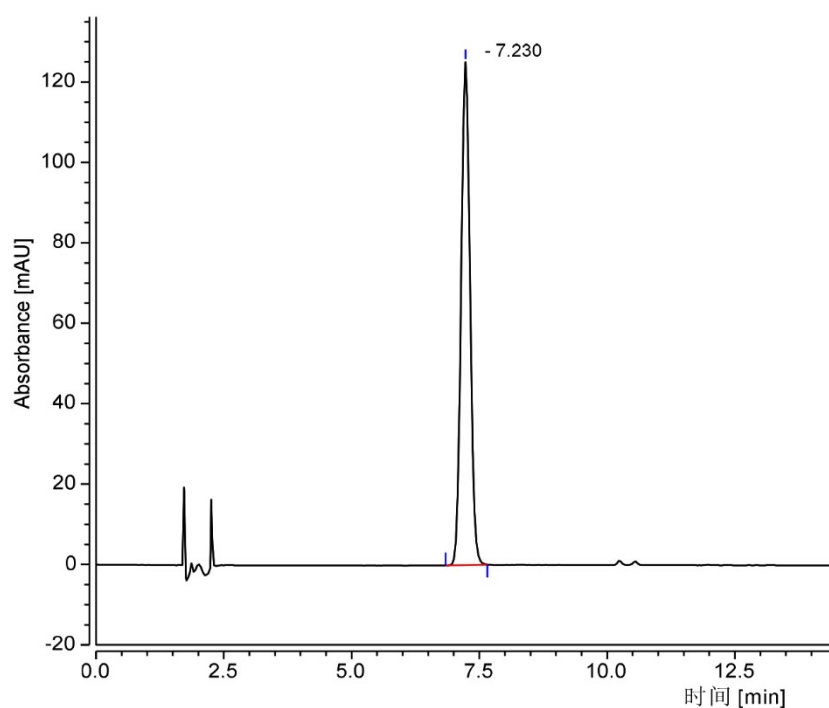


Fig. S-1 The HPLC chromatogram of CGA that was flowed on the HPLC system at 50 µg/mL.

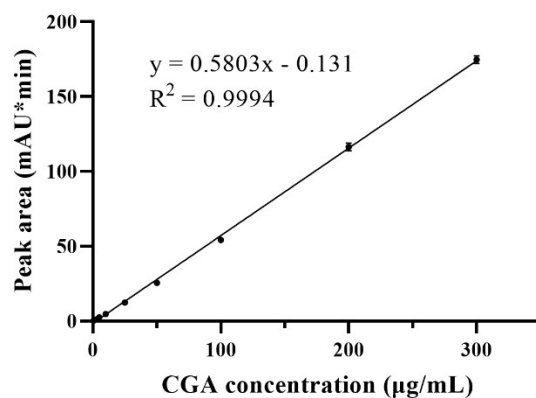


Fig. S-2 The calibration curve of HPLC. The concentrations of CGA were 0.5, 1, 2.5, 5, 10, 25, 50, 100, 200 and 300 µg/mL dissolved in 70:30 methanol–water. Each concentration was analyzed three replicates.

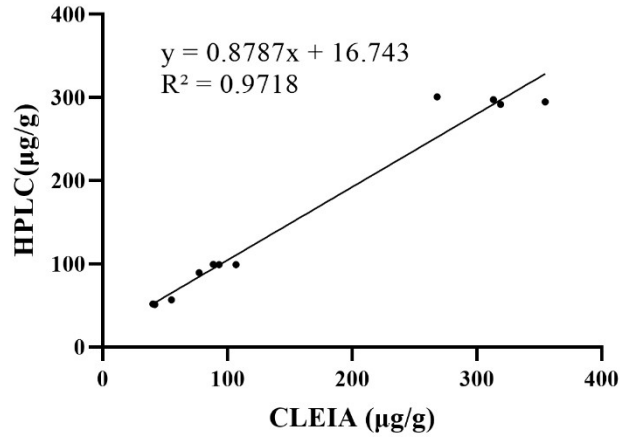


Fig. S-3 Correlation of HPLC and CLEIA for CGA analysis.

Table S-2 Checkerboard titration of the mAb and CGA-OVA

mAb dilution	Coated CGA-OVA concentration (µg/mL)		
	0.5	1	2
1/1000	4060970	4563441	4784318
1/2000	3984209	3961465	4403342
1/4000	3701273	3610415	4172566
1/8000	3591360	3266778	3914861
1/16000	3311666	2944357	3689862
1/32000	2198343	1872355	2672384
1/64000	1511578	1573746	1998729
Blank	98718	76621	32149

Table S-3 Optimization of luminescence detection time

Detection time (min)	Luminescence intensity without CGA (RLU ₀)	Luminescence intensity with 25 ng/mL CGA (RLU)	Inhibition rate (%)
0	456086	210711	53.8
2	587674	267979	54.4
5	957085	416331	56.5
8	852721	381166	55.3
10	720708	337291	53.2
15	470940	209097	55.6

Table S-4 The primary data of the competitive inhibition curve of CLEIA

CGA (ng/mL)		Luminescent Intensity		
0	2264748	2085639	2330253	2228675
0.5	2097484	2111258	2131583	2069621
1	2003218	2067288	1899666	2042701
2.5	1859195	1921410	1868956	1806743
5	1646646	1654468	1627727	1657743
10	1289201	1336406	1301564	1348769
25	916845	1031035	891416	1034562
50	673004	703603	684310	686972
100	509823	502958	474827	495869
250	353865	386170	353731	362480
500	362008	336278	350321	324589
1000	312678	330131	308460	317090