Supplementary materials

Table S1 NMR data for prepared anthocyanin (Pn3G5G)

Position	δ	δ
petunidin	H	C
2		163.9
3		146.7
4	8.96 (1H, S)	133.7
5		157.3
6	7.07 (1H, s, 6-H or 8-H)	105.3
7		168.4
8	6.97 (1H, s, 6-H or 8-H),	97.7
9		156.4
10		113.4
1'		119.7
2'	8.09, 1H, S	108.9
3'		149.0
4'		146.7
5'		146.4
6'	7.77(1H, d, J=2.2 Hz)	114.5
OMe	3.95(3H, s, OCH3)	57.2
3-O-glucosyl		
1	5.51 (1H, d=10.2 Hz, 3G, 3-glycosyl portion)	101.6
2	3.89-3.47 (1H, m)	74.6
3	3.89-3.47 (1H, m)	77.4
4	3.89-3.47 (1H, m)	71.5
5	3.89-3.47 (1H, m)	77.3
6	4.07 m	67.5
rhamnosyl		
1	4.79 (1H, s)	101.4
2	3.89-3.47 (1H, m)	71.6
3	3.89-3.47 (1H, m)	70.5
4	4.89 [1H, t, J = 9.6 Hz, R4-H (R, rhamnosyl portion)]	76.6
5	3.89-3.47 (1H, m)	67.5
6	1.04 (3H, d, J =6.2 Hz, R6-H)	17.5
5-O-glucosyl		
1	5.31 [1H, d, J = 10.2 Hz, (5G, 5-glycosyl portion)]	105.1
2	3.89-3.47 (1H, m)	74.6
3	3.89-3.47 (1H, m)	77.1
4	3.89-3.47 (1H, m)	71.4
5	3.89-3.47 (1H, m)	77.0
6	3.89-3.47 (1H, m)	61.4
***p*-coumaroyl COO**		
COO		168.3
α	6.25 (1H, d, J=15.7 Hz)	115.2
β	7.61 (1H, d, J =15.7 Hz)	146.8
1''		127.0
2'',6''	7.43 (2H, d, J= 8.6 Hz,)	131.2
3'',5''	6.83 (2H, d, J = 8.6 Hz)	117.1
4''		160.2

Table S2 Primer Sequences for qRT-PCR.

Gene	Forward (5’ to 3’)	Reverse (5’ to 3’)
COX-2	AGATGACTGCCCAACTCCCA	GTGAACCCAGGTCCTCGCT
TNF-α	TGTCTCAGCCTCTTCTCATTCC	TTTGTGAGTGTGAGGGTCTGG
IL-6	CCGGAGAGGAGACTTCACAG	CAGAATTGCCATTGCACAAC
β-actin	TGTCACCAACTGGGACGATA	GGGGTGTTGAAGGTCTCAAA

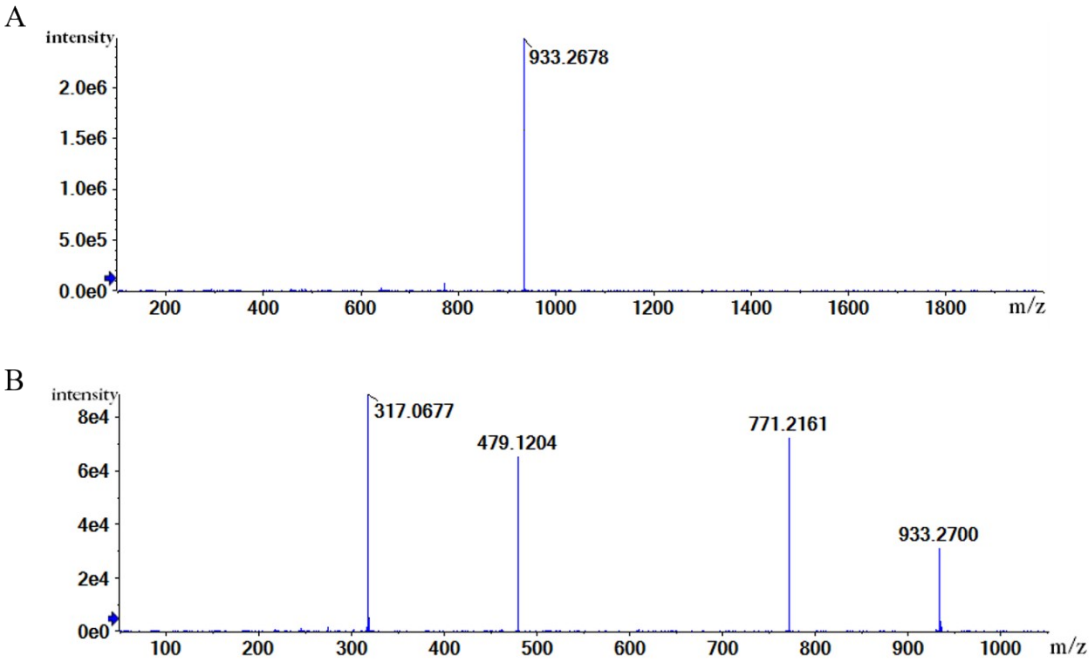

Figure S1. The MS and MS/MS data for obtained fraction (F1 in Fig. 1A) isolated from anthocyanin extract of *Lycium ruthenicum* Murr. fruit (LRF).

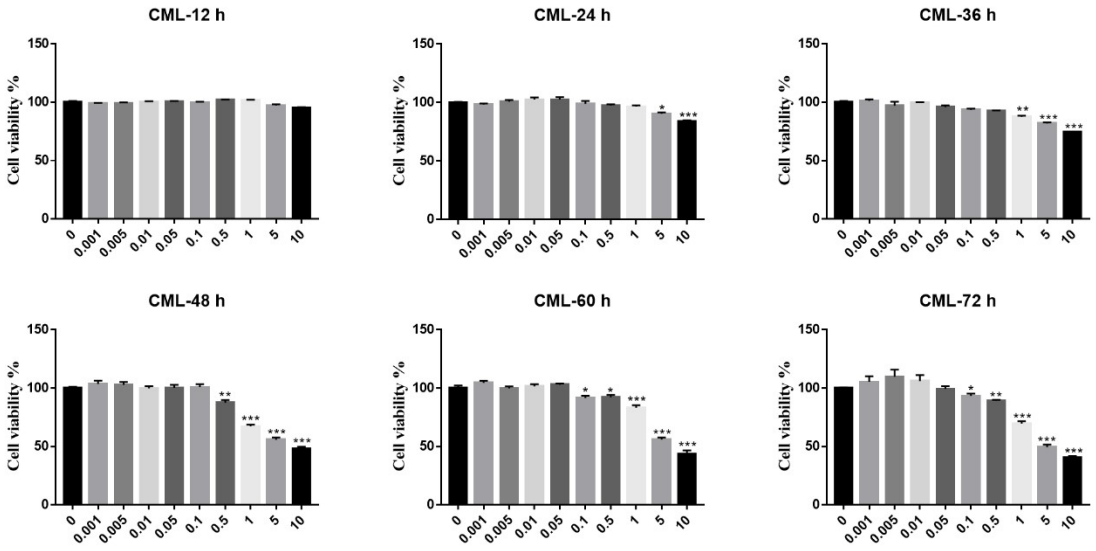

Figure S2. Dose-dependent cytotoxic activity of CML on Neuro-2a cells. Cells were incubated with 0-10 mM CML for 12-72 h and measured for cell viability by CCK8 assay (n = 6).

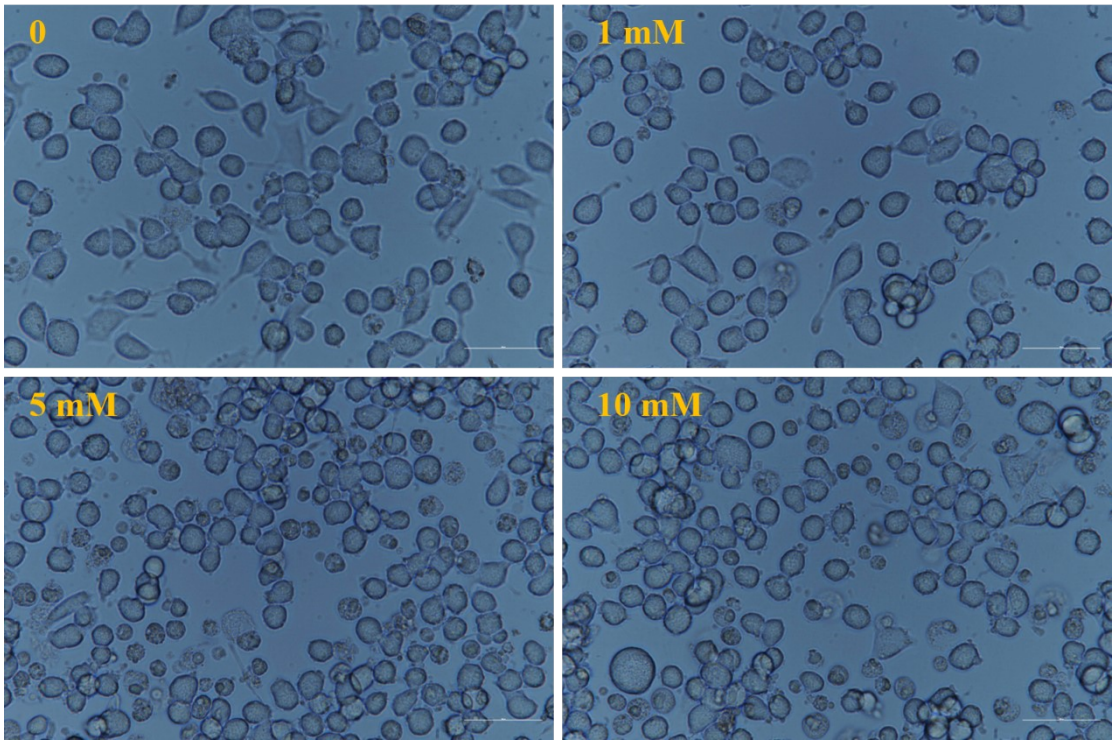

Figure S3. Representative photographs recorded by optical microscope (400 ×). Cells were treated with CML for 48 h and subjected for morphology observation.

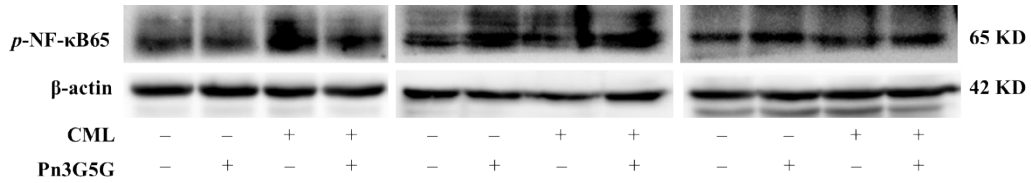

Figure S4. Western blot analysis of three independent experiments. Protein samples were prepared after three independent treatments of CML or Pn3G5G for 48 h.