

## Supplementary material

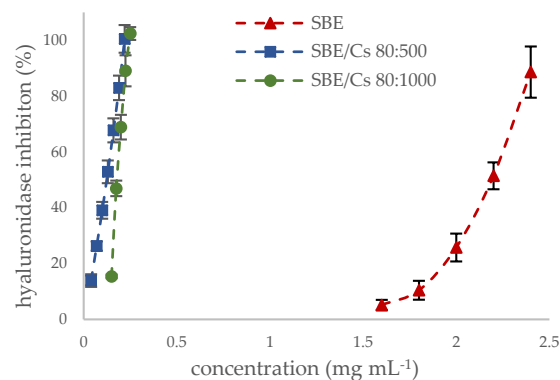
**Table S1.** Validation parameters of the flavones determination by the UHPLC-DAD method.

Parameter	Baicalin	Baicalein	Wogonin
Linearity: $y = ax + b$	$y = 0.2536x - 0.7974$	$y = 0.472 - 2.6637$	$y = 0.3408x$
$a \pm S_a$	$0.2536 \pm 0.009$	$0.472 \pm 0.0036$	$0.3408 \pm 0.0017$
$b \pm S_b$	$-0.7974 \pm 0.1383$	$-2.6637 \pm 0.5401$	insignificant ( $\alpha = 0.05$ )
correlation coefficient (r)	1.0000	0.9999	0.9999
Limit of detection (LOD): LOD = $3 \text{ SD}/a$ ( $\mu\text{g mL}^{-1}$ )	2.42	5.07	3.70
Limit of quantification (LOQ): LOQ = $10 \text{ SD}/a$ ( $\mu\text{g mL}^{-1}$ )	7.32	15.36	11.22
Range of linearity ( $\mu\text{g mL}^{-1}$ )	10–250	10–250	10–250
Precision, RSD			
50 [ $\mu\text{g mL}^{-1}$ ]	0.9092	0.4488	0.7388
100 [ $\mu\text{g mL}^{-1}$ ]	1.4755	1.3150	0.8626
150 [ $\mu\text{g mL}^{-1}$ ]	1.2758	1.1209	0.5473
Intra-day, RSD			
50 [ $\mu\text{g mL}^{-1}$ ]	1.9967	1.7808	1.4532
100 [ $\mu\text{g mL}^{-1}$ ]	1.2791	1.9548	2.4567
150 [ $\mu\text{g mL}^{-1}$ ]	1.1350	1.1504	3.6224
Retention time (min)	30.95	47.36	60.41

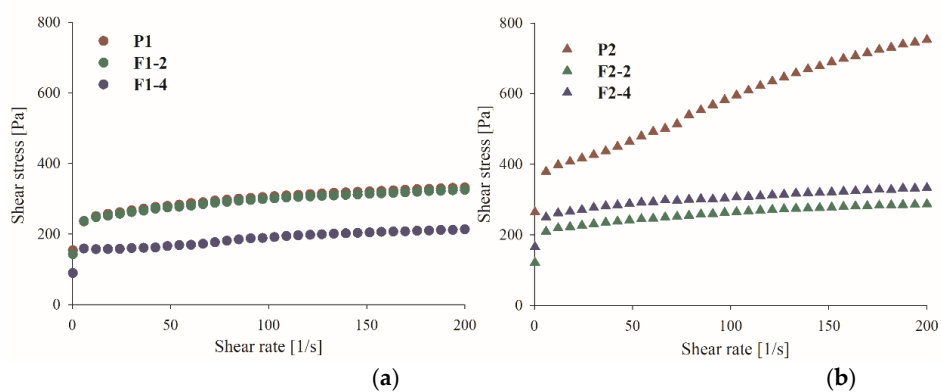
$S_a$  standard deviation of slope;  $S_b$  standard deviation of intercept, t calculated values of the Student's t test,  $t_{\alpha, f} = 2.571$  critical values of the Student's t test for degrees of freedom  $f = 5$  and significance level  $\alpha = 0.05$ .

**Table S2.** The drug flux and the average cumulative amount per area during dissolution studies of formulations with binary mixture of *S. baicalensis radix* lyophilized extract and chitosan.

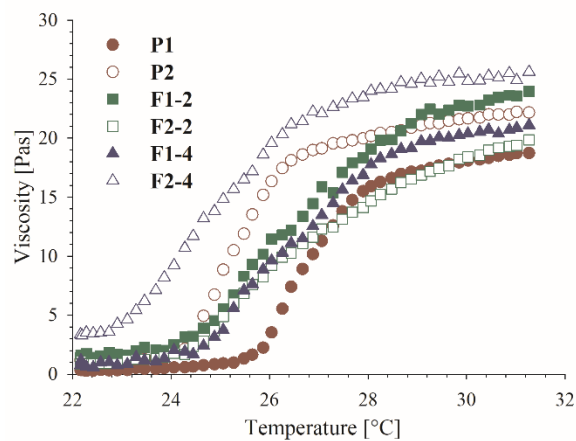
	Drug Flux ( $J_{ss}$ ) [ $\mu\text{g cm}^{-2}\text{h}^{-1}$ ]	b	Correlation Coefficient (r)	Release Coefficient ( $k_r$ ) [ $\text{cm h}^{-1}$ ]	Average Cumulative Amount Per Area at 6 h ( $Q_{6h}$ ) [ $\mu\text{g cm}^{-1}$ ]
<b>Baicalin</b>					
F1-2	$8.29 \pm 0.14$	$22.33 \pm 0.36$	$0.999 \pm 0.000$	$2.37 \pm 0.01$	$71.69 \pm 1.30$
F1-4	$11.55 \pm 0.39$	$20.31 \pm 0.24$	$0.999 \pm 0.000$	$1.62 \pm 0.05$	$89.38 \pm 2.00$
F2-2	$6.44 \pm 0.51$	$22.81 \pm 0.30$	$0.995 \pm 0.004$	$1.78 \pm 0.19$	$60.75 \pm 2.99$
F2-4	$8.74 \pm 1.88$	$19.15 \pm 0.62$	$0.985 \pm 0.018$	$1.23 \pm 0.26$	$72.64 \pm 10.45$
<b>Baicalein</b>					
F1-2	$7.09 \pm 0.10$	$43.69 \pm 0.07$	$0.995 \pm 0.001$	$5.62 \pm 0.08$	$85.62 \pm 0.64$
F1-4	$7.95 \pm 0.15$	$43.56 \pm 0.09$	$0.996 \pm 0.000$	$3.16 \pm 0.06$	$90.65 \pm 0.86$
F2-2	$7.07 \pm 0.04$	$43.75 \pm 0.04$	$0.995 \pm 0.000$	$5.61 \pm 0.03$	$85.63 \pm 0.25$
F2-4	$7.75 \pm 0.10$	$43.59 \pm 0.07$	$0.999 \pm 0.000$	$3.07 \pm 0.04$	$89.60 \pm 0.47$
<b>Wogonin</b>					
F1-2	$0.09 \pm 0.01$	$-0.06 \pm 0.01$	$0.981 \pm 0.007$	$0.17 \pm 0.02$	$0.44 \pm 0.06$
F1-4	$0.17 \pm 0.08$	$-0.13 \pm 0.08$	$0.985 \pm 0.002$	$0.17 \pm 0.08$	$0.88 \pm 0.44$
F2-2	$0.11 \pm 0.00$	$-0.09 \pm 0.00$	$0.975 \pm 0.006$	$0.21 \pm 0.00$	$0.59 \pm 0.02$
F2-4	$0.19 \pm 0.03$	$-0.10 \pm 0.05$	$0.963 \pm 0.010$	$0.19 \pm 0.03$	$1.10 \pm 0.14$



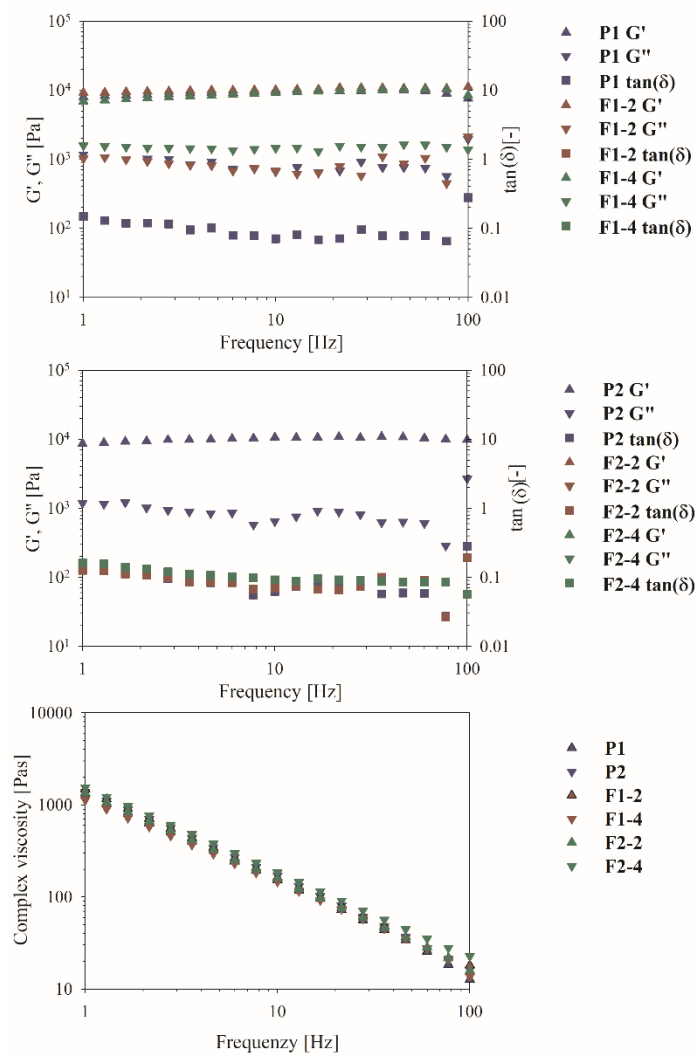
**Figure S1.** The plot presenting inhibition activity of *S. baicalensis radix* extract and binary mixtures toward hyaluronidase enzyme (mean  $\pm$  S.D.,  $n = 6$ ).



**Figure S2.** The flow curves of (a) the gel samples without and (b) after addition of the SBE/Cs 80:500.



**Figure S3.** The temperature sweeping of the gel samples.



**Figure S4.** The oscillatory frequency sweeping of the gel samples.