Supplementary table 1 The raw data of flow cytometry experiment for cellular uptake of RB, PEG-PCL@RB and TPP-PEG-PCL@RB

Control	RB	TPP-PEG-PCL@RB	PEG-PCL@RB
2776	296526	200647	170565
2766	280477	214438	135055
	278772	215166	103289
	313669	250817	
	308604		

Supplementary table 2 The raw data of mitochondria-targeting analysis by of NR, PEG-PCL@NR and TPP-PEG-PCL@NR groups.

Distance_(	Gray_Value		Distance_(	Gray_Value
0	4	0	0	9
1	2.854	0.078125	1	8.577
2	3.428	0.15625	2	6.643
3	2.809	0.234375	3	7.698
4	4.64	0.3125	4	8.201
5	2.42	0.390625	5	9.835
6	4.068	0.46875	6	8.823
7	3.476	0.546875	7	9.127
8	2.278	0.625	8	8.831
9	2.22	0.703125	9	7.723
10	1.288	0.78125	10	7.33
11	0.951	0.859375	11	9.391
12	0.953	0.9375	12	10.008
13	0.179	1.015625	13	9.322
14	0	1.09375	14	8.856
15	0.024	1.171875	15	5.258
16	0	1.25	16	7.199
17	0.013	1.328125	17	7.971
18	0.255	1.40625	18	5.851
19	0.057	1.484375	19	4.079
20	0.618	1.5625	20	5.363
21	0.014	1.640625	21	4.033
22	0	1.71875	22	4.413
23	0	1.796875	23	4.013
24	0	1.875	24	3.771
25	0	1.953125	25	4.251
26	0	2.03125	26	4.284
27	0	2.109375	27	4.975
28	0.16	2.1875	28	6.35
29	0.016	2.265625	29	5.58
30	0	2.34375	30	5.919
31	0.051	2.421875	31	4.975
32	0.182	2.5	32	6.199
33	0	2.578125	33	7.23
34	0	2.65625	34	7.467
35	0	2.734375	35	5.851
36	0	2.8125	36	6.817
37	0	2.890625	37	6.502
38	0	2.96875	38	7.047
39	0	3.046875	39	6.787
40	0	3.125	40	6.49
41	0	3.203125	41	4.98
42	0	3.28125	42	7.514
43	0	3.359375	43	8.752
44	0.482	3.4375	44	8.791
45	0.574	3.515625	45	7.574
46	0.01	3.59375	46	7.008
47	0	3.671875	47	6.4
48	0.331	3.75	48	6.108
49	0.297	3.828125	49	6.617
50	0	3.90625	50	6.621
51	0.234	3.984375	51	8.204
52	1.471	4.0625	52	7.73

53	0.366	4.140625	53	10.135
54	0.901	4.21875	54	10.015
55	1.158	4.296875	55	9.577
56	1.277	4.375	56	12.272
57	1.523	4.453125	57	14.217
58	1.894	4.53125	58	12.726
59	2.454	4.609375	59	14.781
60	2.761	4.6875	60	13.666
61	1.505	4.765625	61	15.429
62	2.304	4.84375	62	16.296
63	1.131	4.921875	63	16.802
64	3.506	5	64	18.476
65	2.1	5.078125	65	17.96
66	1.031	5.15625	66	23.806
67	2.509	5.234375	67	25.063
68	2.153	5.3125	68	20.242
69	4.345	5.390625	69	25.986
70	4.915	5.46875	70	28.451
71	4.289	5.546875	71	30.312
72	5.047	5.625	72	34.825
73	8.546	5.703125	73	41.26
74	9.407	5.78125	74	45.855
75	13.02	5.859375	75	58.307
76	14.187	5.9375	76	87.812
77	12.854	6.015625	77	89.021
78	8.48	6.09375	78	82.174
79	16.465	6.171875	79	88.373
80	17.921	6.25	80	83.655
81	12.522	6.328125	81	82.631
82	10.48	6.40625	82	77.838
83	13.54	6.484375	83	75.751
84	9.603	6.5625	84	74.461
85	7.77	6.640625	85	82.366
86	22.833	6.71875	86	102.897
87	35.273	6.796875	87	114.71
88	49.01	6.875	88	132.008
89	50.671	6.953125	89	132.356
90	43.684	7.03125	90	137.106
91	60.761	7.109375	91	142.843
92	55.408	7.1875	92	152.454
93	57.718	7.265625	93	147.685
94	65.6	7.34375	94	164
95	53.351	7.421875	95	155.813
96	65.428	7.5	96	173.578
97	101.391	7.578125	97	193.097
98	108.509	7.65625	98	188.252
99	124.992	7.734375	99	184.07
100	187.362	7.8125	100	191.39
101	234.084	7.890625	101	186.399
102	251.132	7.96875	102	180.144
103	242.895	8.046875	103	178.59
104	252.237	8.125	104	171.351
105	244.353	8.203125	105	152.285
106	239.593	8.28125	106	142.124
107	192.961	8.359375	107	127.379
108	160.672	8.4375	108	119.933
109	107.494	8.515625	109	114.116
110	69.017	8.59375	110	105.466

111	38.65	8.671875	111	118.035
112	34.263	8.75	112	120.151
113	37.93	8.828125	113	123.299
114	45.601	8.90625	114	127.772
115	29.951	8.984375	115	135.993
116	38.205	9.0625	116	130.685
117	25.595	9.140625	117	119.28
118	23.268	9.21875	118	113.333
119	27.19	9.296875	119	106.244
120	21.864	9.375	120	92.237
121	22.073	9.453125	121	77.954
122	13.817	9.53125	122	66.911
123	9.788	9.609375	123	59.815
124	10.434	9.6875	124	50.606
125	11.564	9.765625	125	38.547
126	18.688	9.84375	126	41.438
127	10.829	9.921875	127	39.763
128	9.993	10	128	36.687
129	7.322	10.07813	129	34.984
130	6.198	10.15625	130	34.129
131	5.164	10.23438	131	36.153
132	6.083	10.3125	132	46.983
133	9.901	10.39063	133	54.162
134	9.424	10.46875	134	66.921
135	10.675	10.54688	135	80.121
136	9.334	10.625	136	91.681
137	6.487	10.70313	137	100.054
138	4.474	10.78125	138	107.652
139	4.526	10.85938	139	88.802
140	4.514	10.9375	140	63.225
141	1.6	11.01563	141	52.4
142	0.505	11.09375	142	38.697
143	1.022	11.17188	143	30.726
144	1.375	11.25	144	21.058
145	2.015	11.32813	145	14.207
146	0.758	11.40625	146	13.599
147	0.275	11.48438	147	12.944
148	0.911	11.5625	148	13.522
149	0.998	11.64063	149	14.075
150	1.702	11.71875	150	10.461
151	1.93	11.79688	151	13.69
152	2.428	11.875	152	8.007
153	3.45	11.95313	153	8.773
154	3.493	12.03125	154	7.634
155	3.79	12.10938	155	8.427
156	2.758	12.1875	156	9.481
157	6.984	12.26563	157	9.235
158	2.409	12.34375	158	10.429
159	1.778	12.42188	159	9.882
160	0.638	12.5	160	7.397
161	0.545	12.57813	161	7.221
162	0.871	12.65625	162	5.874
163	0.06	12.73438	163	7.421
164	0.124	12.8125	164	8.885
165	0	12.89063	165	8.53
166	0	12.96875	166	6.754
167	0	13.04688	167	8.065
168	0	13.125	168	7.568

169	0	13.20313	169	6.537
170	0	13.28125	170	7.122
171	0	13.35938	171	7.059
172	0	13.4375	172	4.949
173	0	13.51563	173	5.386
174	0	13.59375	174	7.856
175	0	13.67188	175	6.635
176	0	13.75	176	6
177	0	13.82813	177	5.894
178	0	13.90625	178	5.13
179	0	13.98438	179	4.968
180	0	14.0625	180	5.475
181	0	14.14063	181	5.586
182	0	14.21875	182	5.773
183	0	14.29688	183	7.339
184	0	14.375	184	7.246
185	0	14.45313	185	6.426
186	0	14.53125	186	6
187	0	14.60938	187	5.617
188	0	14.6875	188	4.8
189	0	14.76563	189	4.399
190	0	14.84375	190	4.44
191	0	14.92188	191	3.55
192	0	15	192	4.276
193	0	15.07813	193	6.937
194	0	15.15625	194	6.347
195	0	15.23438	195	5.489
196	0	15.3125	196	5.098
197	0	15.39063	197	5.583
198	0	15.46875	198	4.774
199	0	15.54688	199	5.677
200	0	15.625	200	5.984
201	0	15.70313	201	5.892
202	0	15.78125	202	4.621
203	0	15.85938	203	5.289
204	0	15.9375	204	5.655
205	0	16.01563	205	6.111
206	0	16.09375	206	6.35
207	0	16.17188	207	5.356
208	0	16.25	208	5.266
209	0	16.32813	209	5.278
210	0	16.40625	210	4.749
211	0	16.48438	211	5.229
212	0	16.5625	212	6.289
213	0	16.64063	213	6.626
214	0	16.71875	214	4.621
215	0	16.79688	215	4.148
216	0	16.875	216	6.435
217	0	16.95313	217	5.27
218	0	17.03125	218	6.234
219	0	17.10938	219	5.677
220	0	17.1875	220	4.27
221	0	17.26563	221	4.7
222	0	17.34375	222	5.297
223	0	17.42188	223	5.648
224	0	17.5	224	6.402
225	0	17.57813	225	5.053
226	0	17.65625	226	5.619

227	0	17.73438	227	6.363
228	0	17.8125	228	5.235
229	0	17.89063	229	4.975
230	0	17.96875	230	5.997
231	0	18.04688	231	7.265
232	0	18.125	232	7.02
233	0	18.20313	233	5.468
234	0	18.28125	234	5.101
235	0	18.35938	235	7
236	0	18.4375	236	7.311
237	0	18.51563	237	8.243
238	0	18.59375	238	5.836
239	0	18.67188	239	6.29
240	0	18.75	240	3.266
241	0	18.82813	241	5.537
242	0	18.90625	242	6.259
243	0	18.98438	243	7.679
244	0	19.0625	244	6.758
245	0	19.14063	245	5.393
246	0	19.21875	246	9.204
247	0	19.29688	247	7.464
248	0	19.375	248	4.551
249	0	19.45313	249	4.628
250	0	19.53125	250	4.319
251	0	19.60938	251	4.961
252	0	19.6875	252	4.975
253	0	19.76563	253	7.584
254	0	19.84375	254	6.337
255	0	19.92188	255	6.214
256	0	20	256	6.675
257	0	20.07813	257	5.166
258	0	20.15625	258	7.386
259	0.46	20.23438	259	6.074
260	0.787	20.3125	260	5.831
261	0	20.39063	261	8.681
262	0	20.46875	262	9.084
263	0.725	20.54688	263	8.417
264	1.973	20.625	264	8.16
265	0.923	20.70313	265	6.97
266	1.102	20.78125	266	8.535
267	1.364	20.85938	267	8.748
268	1.802	20.9375	268	7.714
269	1.983	21.01563	269	11.379
270	3.495	21.09375	270	12.829
271	3.521	21.17188	271	10.471
272	1.381	21.25	272	11.647
273	3.217	21.32813	273	11.024
274	7.25	21.40625	274	11.533
275	7.447	21.48438	275	11.971
276	4.736	21.5625	276	13.595
277	5.212	21.64063	277	13.3
278	6.907	21.71875	278	14.167
279	10.415	21.79688	279	16.33
280	13.798	21.875	280	16.156
281	9.656	21.95313	281	16.86
282	25.4	22.03125	282	18.4
283	19.609	22.10938	283	20.203
284	25.137	22.1875	284	21.326

285	32.786	22.26563	285	23.18
286	27.953	22.34375	286	23.931
287	34.065	22.42188	287	25.241
288	44.732	22.5	288	26.329
289	36.721	22.57813	289	25.255
290	35.298	22.65625	290	26.057
291	33.831	22.73438	291	22.854
292	38.033	22.8125	292	29.316
293	32.654	22.89063	293	25.494
294	47.22	22.96875	294	26.404
295	44.252	23.04688	295	36.988
296	55.671	23.125	296	44.532
297	74.084	23.20313	297	48.884
298	93.639	23.28125	298	56.6
299	159.41	23.35938	299	62.374
300	208.435	23.4375	300	81.03
301	204.262	23.51563	301	98.892
302	216.389	23.59375	302	104.059
303	247.55	23.67188	303	113.59
304	235.592	23.75	304	109.269
305	255	23.82813	305	112.894
306	249.674	23.90625	306	118.452
307	248.057	23.98438	307	136.571
308	229.961	24.0625	308	154.352
309	252.775	24.14063	309	154.897
310	238.364	24.21875	310	148.998
311	247.728	24.29688	311	155.957
312	255	24.375	312	156.419
313	251.612	24.45313	313	125.528
314	209.378	24.53125	314	108.464
315	180.912	24.60938	315	84.69
316	151.591	24.6875	316	63.867
317	102.354	24.76563	317	47.516
318	76.019	24.84375	318	29.787
319	58.097	24.92188	319	23.736
320	54.094	25	320	26.522
321	29.597	25.07813	321	22.554
322	11.201	25.15625	322	21.969
323	9.4	25.23438	323	23.28
324	4.64	25.3125	324	21.42
325	2.956	25.39063	325	19.439
326	2.683	25.46875	326	17.286
327	0.974	25.54688	327	16.961
328	0.387	25.625	328	12.545
329	0	25.70313	329	12.4
330	0	25.78125	330	10.243
331	0	25.85938	331	8.026
332	0	25.9375	332	5.115
333	0	26.01563	333	4.708
334	0	26.09375	334	5.994
335	0	26.17188	335	5.384
336	0	26.25	336	4.584
337	0	26.32813	337	4.054
338	0	26.40625	338	4.904
339	0	26.48438	339	5.625
340	0	26.5625	340	3.413
341	0	26.64063	341	4.686
342	0	26.71875	342	3.567

343	0	26.79688	343	2.968
344	0	26.875	344	2.13
345	0	26.95313	345	4.052
346	0	27.03125	346	3.464
347	0	27.10938	347	3.254
348	0	27.1875	348	4.149
349	0	27.26563	349	3.101
350	0	27.34375	350	3.521
351	0	27.42188	351	4.48
352	0	27.5	352	3.127
353	0	27.57813	353	2.596
354	0	27.65625	354	2.187
355	0	27.73438	355	2.531
356	0	27.8125	356	2.922
357	0	27.89063	357	3.465
358	0	27.96875	358	3.791
359	0	28.04688	359	4.043
360	0	28.125	360	3.181
361	0	28.20313	361	5.454
362	0	28.28125	362	2.825
363	0	28.35938	363	2.254
364	0	28.4375	364	1.776
365	0	28.51563	365	1.679
366	0	28.59375	366	1.224
367	0	28.67188	367	2.611
368	0	28.75	368	2.888
369	0	28.82813	369	2.575
370	0	28.90625	370	3.831
371	0	28.98438	371	3.267
372	0	29.0625	372	2.443
373	0	29.14063	373	2.022
374	0	29.21875	374	2.386
375	0	29.29688	375	2.323
376	0	29.375	376	2.2
377	0	29.45313	377	2.57
378	0	29.53125	378	3.212
379	0	29.60938	379	3.252
380	0	29.6875	380	2.652
381	0	29.76563	381	2
382	0	29.84375	382	2.599
383	0	29.92188	383	2.679
384	0	30	384	2.468
385	0	30.07813	385	2.732
386	0	30.15625	386	3.845
387	0	30.23438	387	2.236
388	0	30.3125	388	2
389	0	30.39063	389	2.222
390	0	30.46875	390	2.361
391	0	30.54688	391	2.217
392	0	30.625	392	2.817
393	0	30.70313	393	2.055
394	0	30.78125	394	2.205
395	0	30.85938	395	2.942
396	0	30.9375	396	2.752
397	0	31.01563	397	2.021
398	0	31.09375	398	3.132
399	0	31.17188	399	2.809
400	0	31.25	400	2

401	0	31.32813	401	2.268
402	0	31.40625	402	2.048
403	0	31.48438	403	2.369
404	0	31.5625	404	2.757
405	0	31.64063	405	2.094
406	0	31.71875	406	2.502
407	0	31.79688	407	1.072
408	0	31.875	408	2.023
409	0	31.95313	409	2.803
410	0	32.03125	410	2.641
411	0	32.10938	411	1.155
412	0	32.1875	412	2.74
413	0	32.26563	413	2.136
414	0	32.34375	414	1.605
415	0	32.42188	415	1.861
416	0	32.5	416	2.242
417	0	32.57813	417	2.123
418	0	32.65625	418	1.98
419	0	32.73438	419	1.961
420	0	32.8125	420	1.728
421	0	32.89063	421	2
422	0	32.96875	422	2.156
423	0	33.04688	423	2.6
424	0	33.125	424	2.801
425	0	33.20313	425	1.943
426	0	33.28125	426	2.093
427	0	33.35938	427	2.059
428	0	33.4375	428	2.014
429	0	33.51563	429	2.786
430	0	33.59375	430	2.489
431	0	33.67188	431	2.468
432	0	33.75	432	3.102
433	0	33.82813	433	3.393
434	0	33.90625	434	2.155
435	0	33.98438	435	2.522
436	0	34.0625	436	2.987
437	0	34.14063	437	2.835
438	0	34.21875	438	2.98
439	0	34.29688	439	2.668
440	0	34.375	440	2.255
441	0	34.45313	441	2.016
442	0	34.53125	442	2.557
443	0	34.60938	443	3.001
444	0	34.6875	444	2.53
445	0	34.76563	445	2.855
446	0	34.84375	446	2.944
447	0	34.92188	447	2.008
448	0	35	448	2.132
449	0	35.07813	449	2.353
450	0	35.15625	450	2.618
451	0	35.23438	451	1.956
452	0	35.3125	452	1.745
453	0	35.39063	453	2.268
454	0	35.46875	454	2.987
455	0	35.54688	455	2.629
456	0	35.625	456	3.276
457	0	35.70313	457	2.137
458	0	35.78125	458	2.284

459	0	35.85938	459	3
460	0	35.9375	460	2.872
461	0	36.01563	461	3.319
462	0	36.09375	462	2.673
463	0	36.17188	463	3.192
464	0	36.25	464	2.898
465	0	36.32813	465	1.167
466	0	36.40625	466	1.839
467	0	36.48438	467	1.539
468	0	36.5625	468	1.424
469	0	36.64063	469	2.334
470	0	36.71875	470	2

Supplementary table 3 The raw data of migration rate of 4T1 cells after incubating with AG and TPP-PEG-PCL@AG for 24h and 36h.

Control	Free AG	TPP-PEG-PCL@AG
21.45994	4.259312	13.43993
17.8626	1.253227	10.18971
23.50511	3.91374	14.35859
		18.4543
		12.66338

Supplementary table 4 The raw data of relative fluorescence intensity of DCFH-DA prob on 4T1 cells after incubating with AG, PEG-PCL@AG and TPP-PEG-PCL@AG for 48h.

Control	Free AG	PEG-PCL@AG	TPP-PEG-PCL@AG
36.79	142.145	67.018	84.791
32.94	137.06	74.74	80.183
38.07	151.32	62.07	85.31

Supplementary table 5 The raw data of fluorescence proportion of JC-1 monomer on 4T1 cells after incubating with AG, PEG-PCL@AG and TPP-PEG-PCL@AG for 24h.

Control	Free AG	PEG-PCL@AG	TPP-PEG-PCL@AG
10.1	32.7	14.9	21.2
11.8	32.4	17.9	25.8
11.9	33.4	16.2	19.8

Supplementary table 6 The raw data of Caspase-3 protein contents from 4T1 cells after incubating with AG, PEG-PCL@AG and TPP-PEG-PCL@AG for 24h.

Control	Free AG	PEG-PCL@AG	TPP-PEG-PCL@AG
23.20414	47.96668	25.47886188	34.83377593
22.78353	51.44067	28.0227946	42.81181901
22.3751	48.94992	28.3866822	45.61009481

Supplementary table 7 The raw data of Caspase-9 protein contents from 4T1 cells after incubating with AG, PEG-PCL@AG and TPP-PEG-PCL@AG for 24h.

Control	Free AG	PEG-PCL@AG	TPP-PEG-PCL@AG
20.86643	35.21023	28.69985	31.68717
20.75072	37.39335	35.06435	33.13963
20.88245	42.58155	35.84966	38.25397