

Medicines involved

Andrographolide: Andrographolide is a NF-κB inhibitor.

Reference: Zhai JZ, Li HW, Liu GW, Qu XH, Tian B, Yan W, Lin Z, Tang TT, Qin A, Dai KR. Andrographolide suppresses RANKL-induced osteoclastogenesis in vitro and prevents inflammatory bone loss in vivo. *Br J Pharmacol.* 2014 Feb;171(3):663-75. doi: 10.1111/bph.12463. PMID: 24125472; PMCID: PMC3969079.

N-acetylcysteine (NAC): N-acetylcysteine is a cysteine precursor and a ROS inhibitor.

Reference: Halasi M, Wang M, Chavan TS, Gaponenko V, Hay N, Gartel AL. ROS inhibitor N-acetyl-L-cysteine antagonizes the activity of proteasome inhibitors. *Biochem J.* 2013 Sep 1;454(2):201-8. doi: 10.1042/BJ20130282. PMID: 23772801; PMCID: PMC4322432.

Zinc protoporphyrin (ZnPP) : ZnPP is an orally active, competitive inhibitor of heme oxygenase-1 (HO-1).

Reference: Park C, Cha HJ, Hong SH, Kim GY, Kim S, Kim HS, Kim BW, Jeon YJ, Choi YH. Protective Effect of Phloroglucinol on Oxidative Stress-Induced DNA Damage and Apoptosis through Activation of the Nrf2/HO-1 Signaling Pathway in HaCaT Human Keratinocytes. *Mar Drugs.* 2019 Apr 13;17(4):225. doi: 10.3390/md17040225. PMID: 31013932; PMCID: PMC6520966.

tert-butylhydroquinone (TBHQ): TBHQ is a widely used Nrf2 activator, protects against Doxorubicin (DOX)-induced cardiotoxicity through activation of Nrf2.

Reference: Wang LF, Su SW, Wang L, Zhang GQ, Zhang R, Niu YJ, Guo YS, Li CY, Jiang WB, Liu Y, Guo HC. Tert-butylhydroquinone ameliorates doxorubicin-induced cardiotoxicity by activating Nrf2 and inducing the expression of its target genes. *Am J Transl Res.* 2015 Oct 15;7(10):1724-35. PMID: 26692920; PMCID: PMC4656753.

retinoic acid (RA): Retinoic acid is a metabolite of vitamin A and plays an important role in cell growth, differentiation and organogenesis. retinoic acid can inhibit the transcription factor Nrf2 by activating the retinoic acid receptor.

Reference: Wang XJ, Hayes JD, Henderson CJ, Wolf CR. Identification of retinoic acid as an inhibitor of transcription factor Nrf2 through activation of retinoic acid receptor alpha. *Proc Natl Acad Sci U S A.* 2007 Dec 4;104(49):19589-94. doi: 10.1073/pnas.0709483104. Epub 2007 Nov 28. PMID: 18048326; PMCID: PMC2148333.

ASTX029: ASTX029 is a potent dual ERK1/2 inhibitor. ASTX029 has anti-cancer activity.

Reference: Heightman TD, Berdini V, Bevan L, Buck IM, Carr MG, Courtin A, Coyle JE, Day JEH, East C, Fazal L, Griffiths-Jones CM, Howard S, Kucia-Tran J, Martins V, Muench S, Munck JM, Norton D, O'Reilly M, Palmer N, Pathuri P, Peakman TM, Reader M, Rees DC, Rich SJ, Shah A, Wallis NG, Walton H, Wilsher NE, Woolford AJ, Cooke M, Cousin D, Onions S, Shannon J, Watts J, Murray CW. Discovery of ASTX029, A Clinical Candidate Which Modulates the Phosphorylation and Catalytic Activity of ERK1/2. *J Med Chem.* 2021 Aug 26;64(16):12286-12303. doi: 10.1021/acs.jmedchem.1c00905. Epub 2021 Aug 13. PMID: 34387469.

SP600125: SP600125 is an orally active, reversible, and ATP-competitive JNK inhibitor.

Reference: Bennett BL, Sasaki DT, Murray BW, O'Leary EC, Sakata ST, Xu W, Leisten JC, Motiwala A, Pierce S, Satoh Y, Bhagwat SS, Manning AM, Anderson DW. SP600125, an anthrapyrazolone inhibitor of Jun N-terminal kinase. Proc Natl Acad Sci U S A. 2001 Nov 20;98(24):13681-6. doi: 10.1073/pnas.251194298. PMID: 11717429; PMCID: PMC61101.

TAK-715: TAK-715 is an orally active and potent p38 MAPK inhibitor.

Reference: Miwatashi S, Arikawa Y, Kotani E, Miyamoto M, Naruo K, Kimura H, Tanaka T, Asahi S, Ohkawa S. Novel inhibitor of p38 MAP kinase as an anti-TNF-alpha drug: discovery of N-[4-[2-ethyl-4-(3-methylphenyl)-1,3-thiazol-5-yl]-2-pyridyl]benzamide (TAK-715) as a potent and orally active anti-rheumatoid arthritis agent. J Med Chem. 2005 Sep 22;48(19):5966-79. doi: 10.1021/jm050165o. PMID: 16162000.

Table S1 OD value and value-added activity of NPC in each group

Groups	Blanks	CTR	24h	48h
OD value	0.2109	2.8708	2.637	2.7726
	0.2298	2.414	2.5336	2.7749
	0.217	2.0945	2.6401	2.3383
	0.2224	2.1539	2.866	2.6843
	0.2201	2.5265	2.3736	2.1558
	121.3513	91.2102	96.3081	
Cell viability (%)	99.6487	105.4757	116.5232	
	85.6563	129.0599	112.9854	
	88.1199	136.8677	127.4605	
Mean value	105.2238	93.3706	83.9273	
	100	111.1968	107.4409	
	12.8854	18.5906	15.4327	
P-value		0.3512	0.4803	

P value indicates comparison with the CTR group. CTR means control.

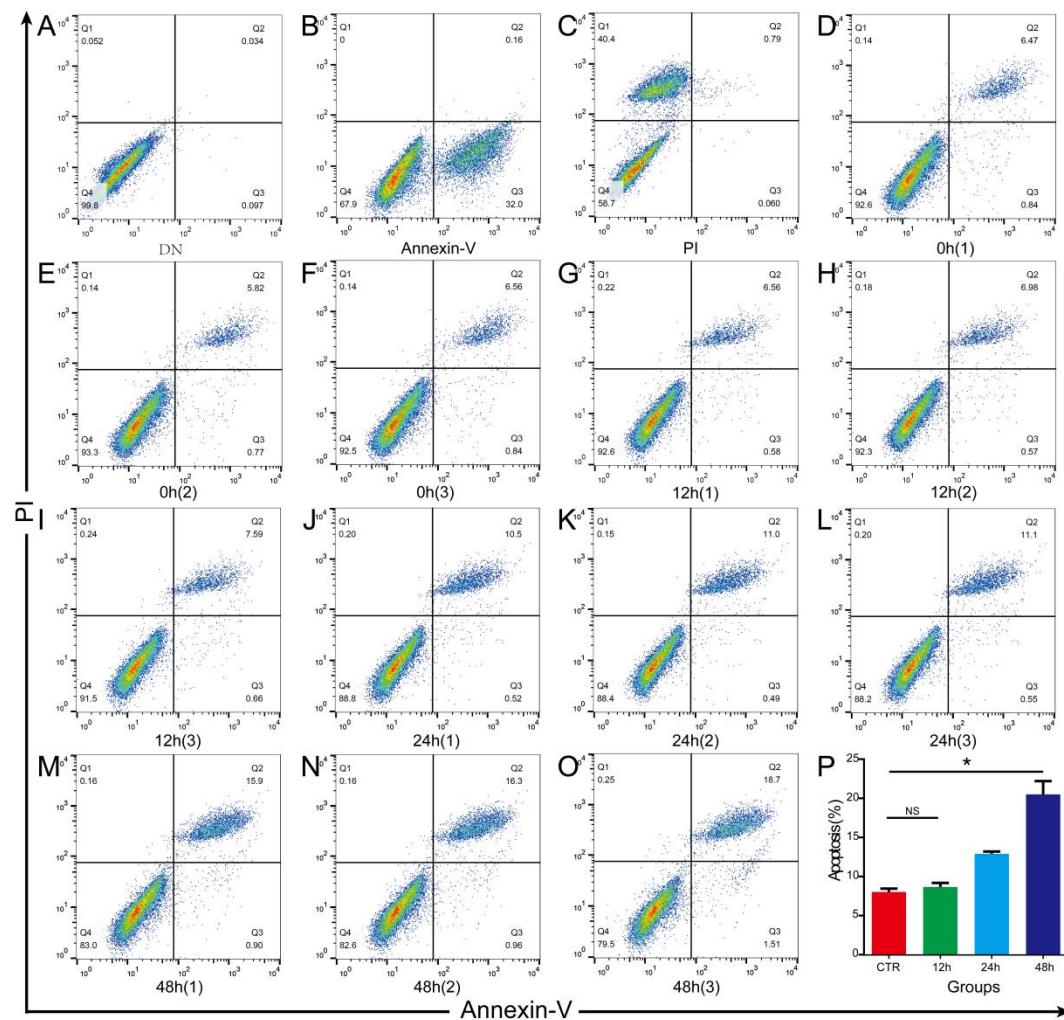


Figure S1. Apoptosis rate of NPC in each group. (A) Double negative control group. (B) Annexin-V control group. (C) PI control group. (D-F) 0 h groups. (G-I) 12 h groups. (J-L) 24 h groups. (M-O) 48 h groups. (P) Apoptosis rate of NPC in each group. NPC: nucleus pulposus cell. DN: double negative. NS: non-significant. *P < 0.05.

Table S2 Apoptosis rate of NPC in each group

Groups	0h	12h	24h	48h
	7.310	7.140	11.020	16.800
Total apoptosis rate (%)	6.590	7.550	11.490	17.260
	7.400	8.250	11.650	20.210
Mean value	7.100	7.647	11.387	18.090
Standard deviation	0.362	0.658	0.267	1.511
P-value		0.256	0.001	0.003

P value indicates comparison with the 0h group.

Table S3 OD value and value-added activity of NPC in each group

Groups	Blanks	0μM	5μM	10μM	15μM	20μM	25μM	30μM
OD value	0.2919	2.2214	2.1178	2.2337	1.9302	1.9907	1.7873	1.8131
	0.2891	2.2933	2.2788	2.1732	2.1763	2.016	1.8704	1.9239
	0.3079	2.2154	2.3409	2.4438	2.0373	1.9405	1.7188	1.6795
	0.2854	2.3858	2.4385	2.2181	2.1916	2.2305	1.5372	1.5627
	0.2755	2.2949	2.428	2.4259	2.0226	1.8831	1.6289	1.6171
	0.2769	2.2696	2.3718	2.282	2.0333	1.9242	1.9348	1.8075
Cell viability (%)	96.8500	94.6300	100.6400	84.9100	88.0400	77.5000	78.8400	96.8500
	100.6000	99.2800	94.0100	94.1600	86.1600	78.9000	81.5700	100.6000
	95.7400	106.5800	111.9700	90.6600	85.5900	73.9700	71.9100	95.7400
	105.4300	102.5100	92.0200	90.7500	92.6100	59.6000	60.8100	105.4300
	101.3600	106.5900	106.4900	86.5200	79.6100	67.0200	66.4400	101.3600
	100.0200	105.1300	100.6200	88.1400	82.6700	83.2000	76.8100	100.0200
Mean value		100.0000	102.4500	100.9600	89.1900	85.7800	73.3600	72.7300
Standard deviation		3.1500	3.9800	5.3500	6.2300	7.9900	14.6100	14.7300
P-value			0.3302	0.782	0.0003	0.0001	0.0000	0.0000

P value indicates comparison with the 0μM group.

Table S4 OD value and value-added activity of NPC in each group

Groups	Blanks	CTR	PRE	ADR+PRE	NAC+PRE
OD value	0.2653	2.5811	1.4289	2.0431	2.0789
	0.2609	2.5538	1.6176	2.0524	1.8575
	0.2643	2.5764	1.5382	1.9813	2.0888
	0.2703	2.4632	1.4415	1.9727	2.0298
	0.2741	2.5584	1.5096	1.9416	1.9160
	0.2634	2.5969	1.4969	1.8574	1.8542
Cell viability (%)	101.1900	50.2500	76.7700	78.3100	
	100.1900	59.1700	78.1300	69.6300	
	101.0300	55.1000	74.2600	78.9100	
	95.8200	53.4100	77.6300	80.2400	
	99.8100	54.0900	73.0000	71.8800	
	101.9600	52.8600	68.3100	68.1700	
Mean value	100.0000	54.1400	74.6800	74.5200	
Standard deviation	1.9900	2.6900	3.3800	4.7900	
*P-value		0.0000	0.0000	0.0000	
#P-value			0.0000	0.0000	

*P values indicate comparison with CTR group; #P values indicate comparison with PRE group.

CTR: control, PRE: pressure, ADR: andrographolide, NAC: N-acetylcysteine.

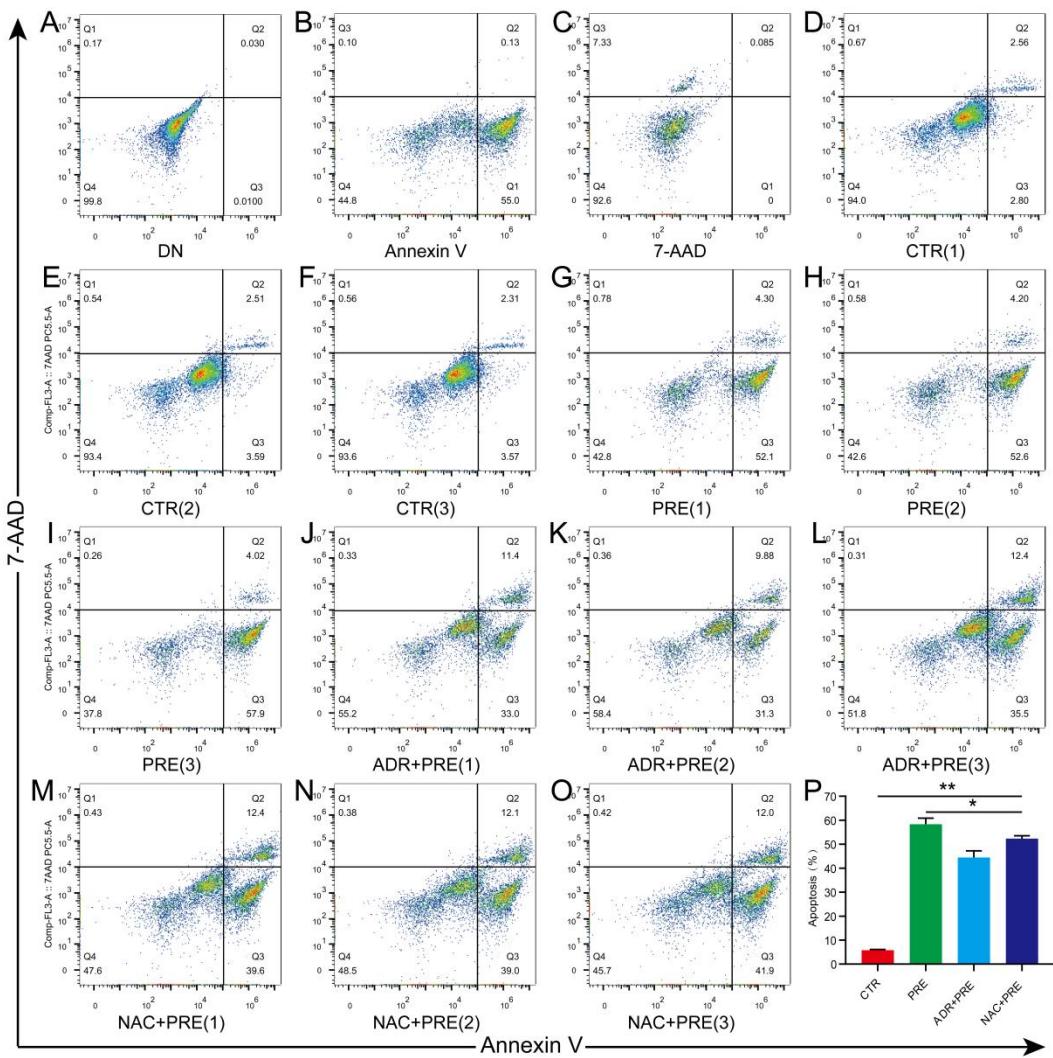


Figure S2. Apoptosis rate of NPC in each group. (A) Double negative control group. (B) Annexin-V control group. (C) 7-AAD control group. (D-F) Control groups. (G-I) RRE groups. (J-L) ADR+PRE groups. (M-O) NAC+PRE groups. (P) Apoptosis rate of NPC in each group. ADR: andrographolide, NPC: nucleus pulposus cell, NAC: N-acetylcysteine, DN: double negative. CTR: control, PRE: pressure. NS: non-significant. *P < 0.05. **P < 0.01.

Table S5 Fluorescence intensity of each group of NPC

Groups	CTR	PRE	ADR+PRE	NAC+PRE	ROSup
	7619	24389	22373	20937	27262
	7955	26693	23147	22485	26854
Fluorescence intensity	9336	26789	21519	24275	27951
	9552	30939	20709	23270	29823
	8518	27289	24236	21791	30262
	8562	29656	25784	22376	29407
Mean value	8590	27625	22961	22522	28593
Standard deviation	687	2132	1690	1057	1302
*P-value		0.0000	0.0000	0.0000	0.0000
#P-value			0.0033	0.0007	0.4068

*P values indicate comparison with CTR group; #P values indicate comparison with PRE group.

CTR: control, PRE: pressure, ADR: andrographolide, NAC: N-acetylcysteine, ROSup: reactive oxygen species positive control reagent.

Table S6 Apoptosis rate of NPC in each group

Groups	CTR	PRE	ADR+PRE	NAC+PRE
	5.360	56.400	44.400	52.000
Total apoptosis rate (%)	6.100	56.800	41.180	51.100
	5.880	61.920	47.900	53.900
Mean value	5.780	58.373	44.493	52.333
Standard deviation	0.310	2.513	2.744	1.167
*P-value		0.000	0.000	0.000
#P-value			0.006	0.037

*P values indicate comparison with CTR group; #P values indicate comparison with PRE group.

CTR: control, PRE: pressure, ADR: andrographolide, NAC: N-acetylcysteine.

Table S7 Analysis of grayscale values of each group of strips

Groups	0h	2h	4h	8h
	0.1332	0.4661	1.0854	1.5449
HO-1/ β -Actin	0.0602	0.3727	1.3112	1.7785
	0.0584	0.1801	0.807	1.8634
Mean value	0.0839	0.3396	1.0679	1.7289
Standard deviation	0.0348	0.1191	0.2062	0.1347
P-value		0.0435	0.0026	0.0001
	0.0413	0.1927	0.6593	0.9577
p-Nrf2/ β -Actin	0.0495	0.3148	0.7808	1.2959
	0.1509	0.3517	1.2908	2.1012
Mean value	0.0806	0.2864	0.9103	1.4516
Standard deviation	0.0498	0.0679	0.2736	0.4796
P-value		0.026	0.0135	0.0159
	0.3209	0.1379	0.1102	0.151
Nrf2/ β -Actin	0.5834	0.7938	0.694	0.8512
	1.3066	0.4333	0.7166	0.9986
Mean value	0.737	0.455	0.5069	0.6669
Standard deviation	0.4168	0.2682	0.2807	0.3698
P-value		0.4662	0.5526	0.8675

P-values indicate comparison with 0h group.

Table S8 Analysis of grayscale values of each group of strips

Groups	CTR	PRE	ADR	ZnPP	ADR+PRE	ZnPP+PRE	ADR+ZnPP+PRE
	0.652	0.9098	2.3057	0.0987	2.5821	0.4329	0.2531
HO-1/ β -Actin	0.2232	0.3303	1.2624	0.0761	1.4017	0.1205	0.1526
	0.1063	0.1797	1.4353	0.0248	2.0013	0.1044	0.0948
Mean value	0.3271	0.4733	1.6678	0.0665	1.995	0.2193	0.1668
Standard deviation	0.2346	0.3147	0.4566	0.0309	0.4819	0.1512	0.0654
*P-value		0.6264	0.021	0.1943	0.0117	0.6138	0.4046
#P-value			0.0382	0.1431	0.0201	0.3618	0.2489
$^{\$}$ P-value						0.0076	0.006

*P-values indicate comparison with CTR group; #P-values indicate comparison with PRE group;
 $^{\$}$ P-values indicate comparison with ADR+ PRE group. CTR: control, PRE: pressure, ADR: andrographolide, ZnPP: HO-1 inhibitor.

Table S9 Fluorescence intensity of each group of NPC

Groups	CTR	PRE	ADR	ZnPP	ADR+PRE	ZnPP+PRE	ADR+ZnPP+PRE	ROSup
	7106	27720	8365	8361	21043	29328	26280	29034
	7356	29411	8513	7688	19600	25604	28413	28540
Fluorescence intensity	7162	26500	8396	8840	19132	28363	27437	29083
	7735	27377	7546	8000	19220	27351	29751	31828
	7135	29748	7547	8591	18905	28740	28975	31305
	8968	27523	8234	7458	20031	29502	28684	30553
Mean value	7577	28046	8100	8156	19655	28148	28256	30057
Standard deviation	658	1153	399	488	718	1337	1120	1240
*P-value		0.0000	0.1596	0.1449	0.0000	0.0000	0.0000	0.0000
#P-value					0.0000	0.9002	0.7761	0.0241
§P-value						0.0000	0.0000	0.0000

*P-values indicate comparison with CTR group; #P-values indicate comparison with PRE group;

§P-values indicate comparison with ADR+PRE group. CTR: control, PRE: pressure, ADR:

andrographolide, ZnPP: HO-1 inhibitor, ROSup: reactive oxygen species positive control reagent.

Table S10 Analysis of grayscale values of each group of strips

Groups	CTR	ADR	TBHQ	RA	ADR+TBHQ	ADR+RA
HO-1/β-Actin	0.0233	0.8352	0.309	0.01	0.6508	0.0995
	0.0568	1.0099	0.5441	0.0575	0.9889	0.0614
	0.0492	0.9616	0.3888	0.0281	0.7427	0.1335
	Mean value	0.0431	0.9356	0.414	0.0319	0.7942
	Standard deviation	0.0143	0.0736	0.0976	0.0196	0.1427
	*P-value		0.0001	0.006	0.5481	0.0018
p-Nrf2/β-Actin	#P-value			0.0038	0.0001	0.281
		0.3275	1.406	1.3513	0.0283	2.1658
		0.7878	1.6322	1.6677	0.2191	2.3483
		0.2288	1.1064	1.2216	0.05	1.3332
	Mean value	0.448	1.3815	1.4135	0.0991	1.9491
	Standard deviation	0.2436	0.2153	0.1874	0.0853	0.4418
Nrf2/β-Actin	*P-value		0.0153	0.0113	0.1285	0.0136
	#P-value			0.8818	0.0014	0.1778
		0.6638	0.608	0.4502	0.546	0.5239
		0.7583	0.4122	0.5823	0.507	0.6595
		0.6603	0.9938	0.5862	0.7272	0.7864
	Mean value	0.6942	0.6714	0.5396	0.5934	0.6566
Standard deviation	Standard deviation	0.0454	0.2416	0.0632	0.0959	0.1072
	*P-value		0.902	0.0484	0.2506	0.6718
	#P-value			0.497	0.6934	0.9409
						0.7551

*P-values indicate comparison with control group; #P-values indicate comparison with ADR group.

CTR: control, ADR: andrographolide, TBHQ: tert-butylhydroquinone (Nrf2 agonist), RA: retinoic acid (Nrf2 inhibitor).

Table S11 Analysis of grayscale values of each group of strips

Groups	CTR	ADR	ADR+AST	ADR+AST	ADR+SP60	ADR+AST
			X029+SP60 0125	X029+TAK- 715	0125+TAK- 715	X029+SP60 0125+TAK- 715
	0.9466	0.6272	1.1868	0.7764	0.7417	0.9879
p38/β-Actin	1.1383	1.3749	1.0729	0.7803	0.7316	1.0853
	1.9279	1.8096	1.6302	1.5422	1.5339	1.3830
Mean value	1.3376	1.2706	1.2966	1.0329	1.0024	1.1521
Standard deviation	0.4247	0.4883	0.2404	0.3601	0.3759	0.1681
*P-value		0.8907	0.9113	0.4823	0.4503	0.5965
#P-value			0.9493	0.6091	0.5715	0.7618
	0.3305	1.0520	1.4450	0.2850	0.2657	0.3791
p-p38/β-Actin	0.1429	1.3349	1.0540	0.1659	0.1945	0.2345
	0.3404	2.5288	2.1604	0.6103	0.6422	0.5441
Mean value	0.2713	1.6386	1.5531	0.3537	0.3675	0.3859
Standard deviation	0.0908	0.6400	0.4581	0.1878	0.1964	0.1265
*P-value		0.0403	0.0178	0.6060	0.5636	0.3567
#P-value			0.8854	0.0528	0.0549	0.0532
	1.0449	0.8977	1.4019	0.9458	0.7725	1.1594
Erk1/2/β-Actin	0.9630	0.6857	0.5684	0.5083	0.4403	0.7165
	1.6345	1.6950	2.1521	1.6959	2.1460	1.8201
Mean value	1.2141	1.0928	1.3742	1.0500	1.1196	1.2320
Standard deviation	0.2991	0.4345	0.6469	0.4904	0.7383	0.4535
*P-value		0.7613	0.7667	0.7068	0.8748	0.9651
#P-value			0.6365	0.9309	0.9669	0.7695
	0.2061	1.1687	0.2794	0.2452	0.8947	0.1842
p-Erk1/2/β-Actin	0.1692	1.3595	0.2817	0.2400	0.9833	0.3279
	0.2710	2.5623	0.4113	0.3400	1.5627	0.3040
Mean value	0.2154	1.6968	0.3241	0.2750	1.1469	0.2720
Standard deviation	0.0421	0.6169	0.0617	0.0459	0.2963	0.0629
*P-value		0.0276	0.1085	0.2474	0.0117	0.3496
#P-value			0.0351	0.0314	0.3192	0.0314
	1.4529	1.1170	1.3850	0.9833	0.9558	1.1056
JNK/β-Actin	0.7944	0.9723	0.7106	0.6552	0.6639	1.1766
	1.8759	2.3355	1.6818	1.6920	1.9920	1.9762
Mean value	1.3744	1.4749	1.2591	1.1102	1.2039	1.4195
Standard deviation	0.4450	0.6114	0.4063	0.4327	0.5699	0.3947
*P-value		0.8601	0.8001	0.5795	0.7554	0.9199

	#P-value		0.6990	0.5289	0.6703	0.9194
	0.5142	1.1735	0.2661	0.7696	0.2181	0.2538
p-JNK/β-Actin	0.2498	1.1048	0.2314	0.9387	0.2736	0.4402
	0.3911	1.9363	0.4169	1.2160	0.4426	0.4488
Mean value	0.3850	1.4049	0.3048	0.9748	0.3114	0.3809
Standard deviation	0.1080	0.3768	0.0805	0.1840	0.0955	0.0899
*P-value		0.0212	0.4470	0.0174	0.5102	0.9690
#P-value			0.0156	0.2206	0.0164	0.0202
	1.5366	1.0234	1.6590	0.8543	0.8820	0.9480
Nrf2/β-Actin	0.6039	0.8562	0.8839	0.6690	0.6238	0.7644
	0.9514	1.7219	1.2846	1.3506	1.1246	1.0531
Mean value	1.0306	1.2005	1.2758	0.9580	0.8768	0.9218
Standard deviation	0.3849	0.3750	0.3165	0.2877	0.2045	0.1193
*P-value		0.6780	0.5249	0.8411	0.6439	0.7219
#P-value			0.8388	0.5082	0.3441	0.3732
	0.2517	1.0548	0.8405	0.5057	0.5435	0.3280
p-Nrf2/β-Actin	0.2618	1.2074	0.6081	0.9366	0.6275	0.3484
	0.3298	2.4772	1.4012	1.2110	0.9596	0.3035
Mean value	0.2811	1.5798	0.9499	0.8844	0.7102	0.3266
Standard deviation	0.0347	0.6376	0.3329	0.2903	0.1797	0.0184
*P-value		0.0452	0.0475	0.0433	0.0295	0.1759
#P-value			0.2833	0.2331	0.1370	0.0499
	0.0451	1.1603	1.3005	0.4869	0.3946	0.7086
HO-1/β-Actin	0.0149	1.0924	0.7189	0.4470	0.3378	0.5155
	0.0538	1.1046	1.0478	0.4492	0.6723	0.4811
Mean value	0.0379	1.1191	1.0224	0.4610	0.4682	0.5684
Standard deviation	0.0167	0.0296	0.2381	0.0183	0.1461	0.1001
*P-value		0.0000	0.0043	0.0000	0.0144	0.0018
#P-value			0.5993	0.0000	0.0035	0.0017

*P-values indicate comparison with CTR group; #P-values indicate comparison with ADR group,
 CTR: control, ADR: andrographolide, ASTX029: ERK1/2 inhibitor, SP600125: JNK inhibitor,
 TAK-715: p38 inhibitor.

Table S12 Analysis of grayscale values of each group of strips

Groups	CTR	SOL	PRE	EXP
HO-1/ β -Actin	0.1452 0.2004 0.1505 Mean value Standard deviation *P-value #P-value \$P-value	0.1839 0.1118 0.1171 0.1376 0.0328 0.3950 0.0000 0.0015	0.9768 0.9875 0.9499 0.9714 0.0158 0.0000 0.0015 0.0379	1.7446 1.1661 1.5923 1.5010 0.2448 3.0818 2.5691 3.0487
p-Nrf2/ β -Actin	0.1789 0.1179 0.1326 Mean value Standard deviation *P-value #P-value \$P-value	0.1117 0.0886 0.0849 0.0951 0.0119 0.0761 0.0064 0.0001	1.5762 1.0062 0.9603 1.1809 0.2802 0.0054 0.0001 0.0026	3.0818 2.5691 3.0487 2.8999 0.2343 0.0001 0.0001 0.0026
Nrf2/ β -Actin	1.7175 1.8234 1.0656 Mean value Standard deviation *P-value #P-value \$P-value	1.0627 1.1691 1.3453 1.1924 0.1165 0.2432 0.3175 0.4825	1.3252 1.2849 1.1696 1.2599 0.0660 0.5149 0.1664 0.2313	1.2865 1.3301 1.4313 1.3493 0.0607 0.4825 0.1664 0.2313
Collagen II/ β -Actin	1.7706 1.7625 1.6387 Mean value Standard deviation *P-value #P-value \$P-value	1.5160 1.3408 1.7056 1.5208 0.1489 0.1484 0.0000 0.0007 0.0001	0.4796 0.5585 0.5008 0.5130 0.0333 0.0000 0.0002 0.0115 0.0001	1.0847 1.0045 1.0418 1.0437 0.0328 0.0002 0.0115 0.0001 0.0001
Aggrecan/ β -Actin	1.0802 1.3352 1.2484 Mean value	1.1750 0.9548 1.1073 1.0790	0.5259 0.5389 0.4150 0.4933	0.8092 0.7895 0.9077 0.8355

Standard deviation	0.1059	0.0921	0.0556	0.0517
*P-value		0.2250	0.0010	0.0098
#P-value			0.0015	0.0310
\$P-value				0.0031

*P-values indicate comparison with CTR group; #P-values indicate comparison with SOL group;

\$P-values indicate comparison with PRE group. CTR: control, SOL: solvent, PRE: pressure, EXP: experiment.