Supplementary information

Synergistic Protection of N-Acetylcysteine and Ascorbic Acid 2-Phosphate on Human Mesenchymal Stem cells Against Mitoptosis,Necroptosisand Apoptosis

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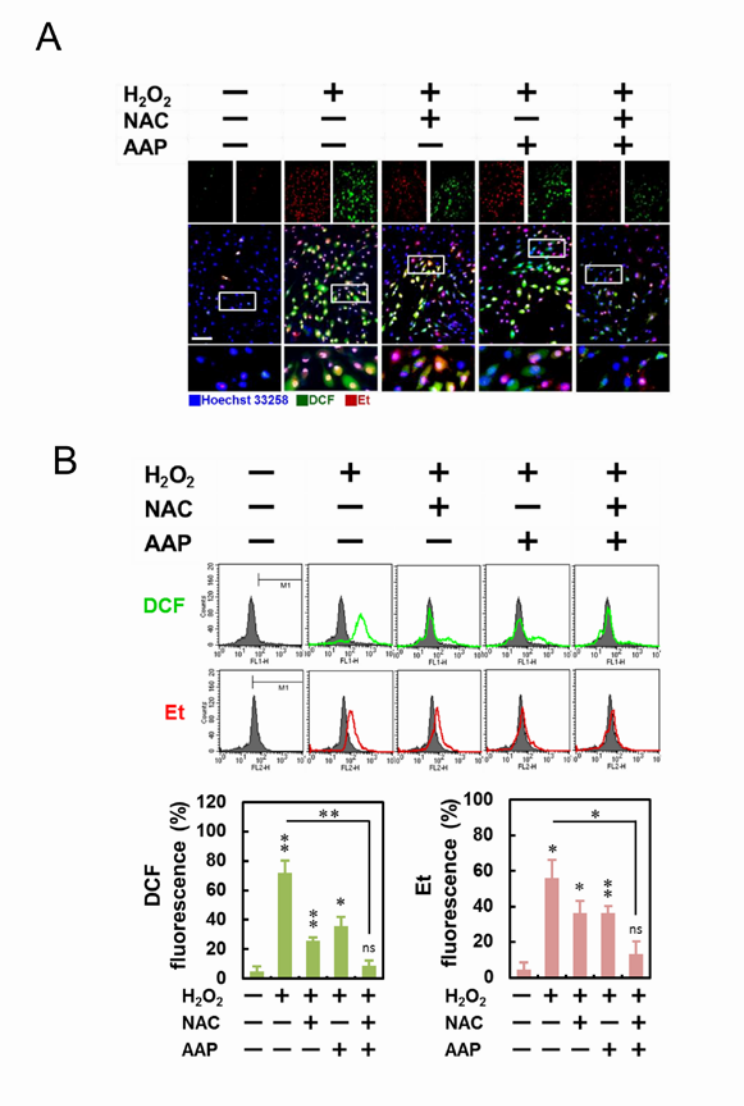
Supplementary Fig. S1



Supplementary Fig. S1 NAC/AAP suppressed the generation of intracellular ROS in H_2O_2-treated hADMSCs

(A) hADMSCs were pre-treated with NAC and/or AAP followed by H_2O_2 challenge. After various treatments, the cells were stained with DCFDA (green) or DHE (red), respectively, and counterstained with Hoechst 33258 (blue); the level of ROS was detected by fluorescence microscope. Scale bar = 100 μm. (B) Flow cytometric analysis of the ROS in various groups of NAC- and/or AAP-treated hADMSCs. Quantitative data were depicted and analyzed from the FL1-H and FL2-H of each histogram. The changes of fluorescence depicted from DCF (oxidized form of

DCFDA) and Et (oxidized form of DHE), respectively, were statistically significant between the treated-groups and the non-treated control. * $p < 0.05$, ** $p < 0.01$, ns, not significant.

Supplementary Table S1. Combination index (CI) and Dose reduction index (DRI) for drug combination by NAC and AAP.

		NAC			AAP		
		Concentration (mM)			Concentration (mM)		
Percentage of protection		Alone	Mix		Alone	Mix	
Drug combinations IC_{25}	CI			DRI			DRI
Group 1	0.893	7	1	7.0	0.8	0.6	1.3
Group 2	0.911	7	2	3.5	0.8	0.5	1.6
Group 3	0.679	7	3	2.3	0.8	0.2	4.0
Group 4	0.804	7	3	2.3	0.8	0.3	2.7
Group 5	0.786	7	2	3.5	0.8	0.4	2.0
Group 6	0.929	7	3	2.3	0.8	0.4	2.0
Group 7	1.196	7	4	1.8	0.8	0.5	1.6

CI and DRI represent the fold of dose reduction that is allowed in combination for a given degree of effects as compared with the dose of each drug alone.