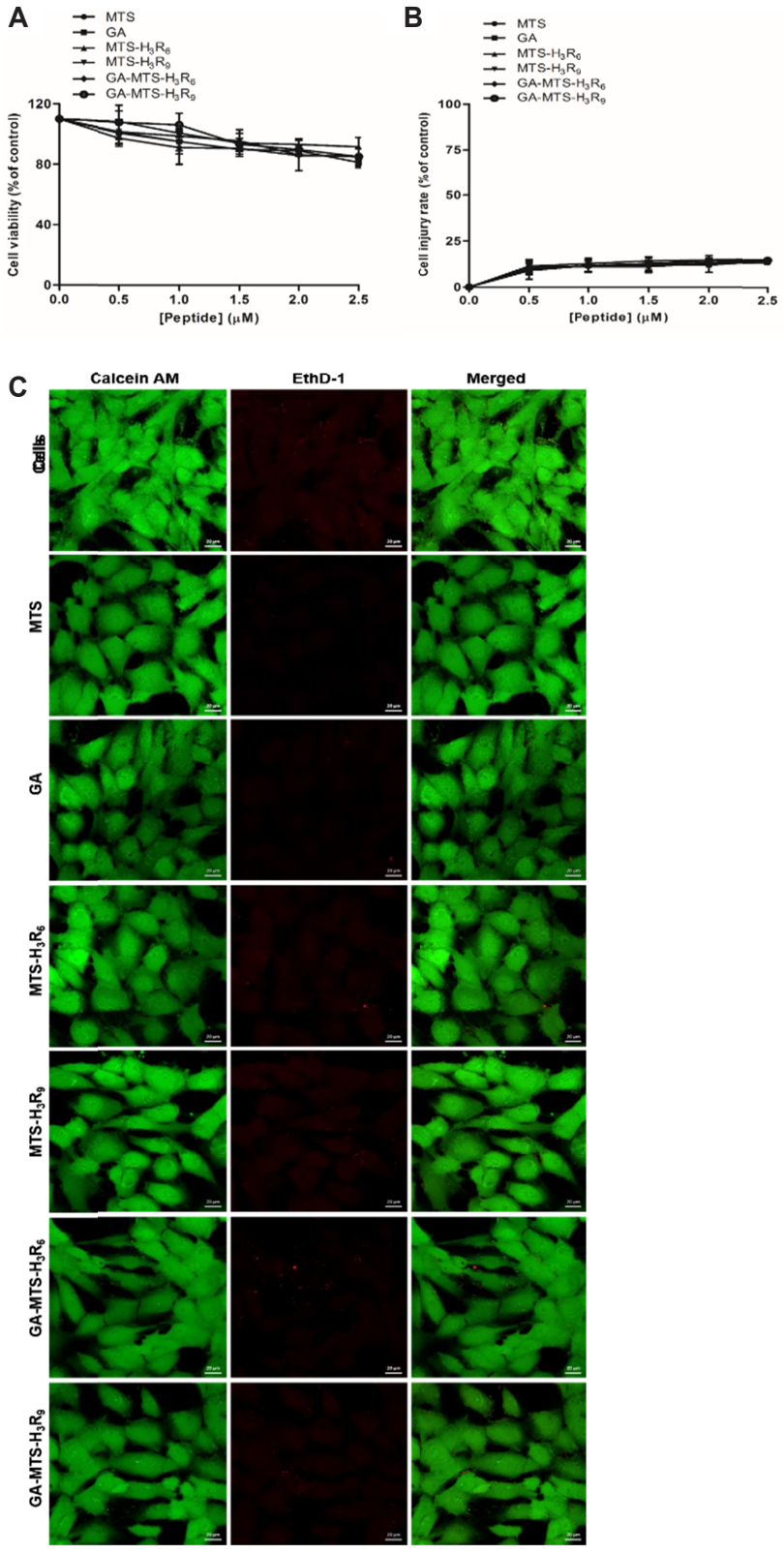
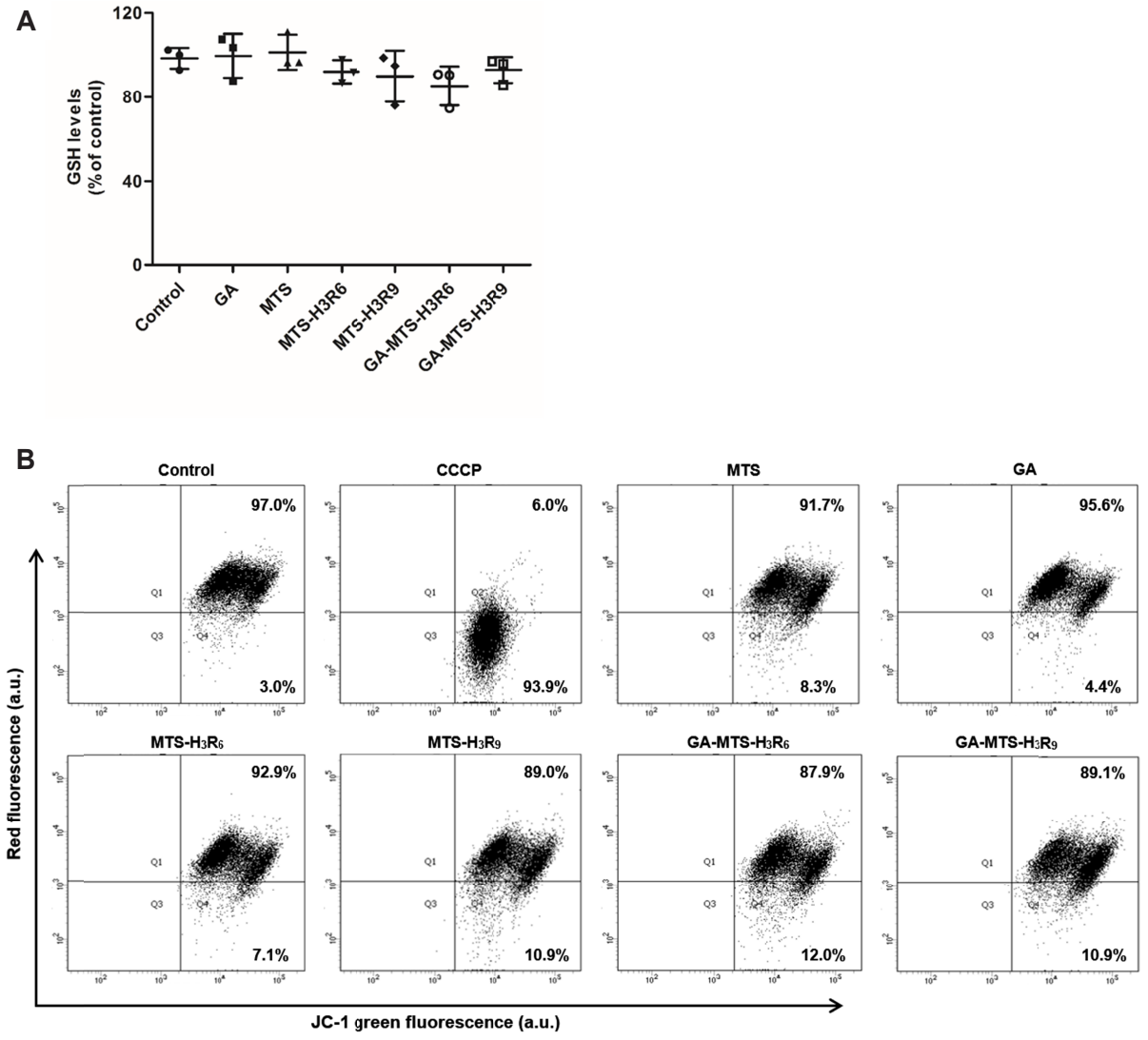
Supplementary Table 1. Molecular weight and full sequence information of synthesized MTS peptides

Peptide name	Sequence	MS expected	MS found
K (gallic acid)	K (gallic acid)	298.3	297.9
MTS	MLSLRQSIRFFKPATRTLCSSRYLL-NH_2	2,987.6	2,988
MTS-H_3R_6	MLSLRQSIRFFKPATRTLCSSRYLLHHHRRRRRR-NH_2	4,336.1	4,335
MTS-H_3R_9	MLSLRQSIRFFKPATRTLCSSRYLLHHHRRRRRRRRR-NH_2	4,804.7	4,805
GA-MTS-H_3R_6	Gallic acidKMLSLRQSIRFFKPATRTLCSSRYLLHHHRRRRRR-NH_2	4,616.4	4,616
GA-MTS-H_3R_9	Gallic acidKMLSLRQSIRFFKPATRTLCSSRYLLHHHRRRRRRRRR-NH_2	5,085.0	5,085
FITC-K (gallic acid)	FITC-aca-K (gallic acid)	800.9	800.3
FITC-MTS	FITC-aca-MLSLRQSIRFFKPATRTLCSSRYLL-NH_2	3,490.2	3,490
FITC-MTS-H_3R_6	FITC-aca-MLSLRQSIRFFKPATRTLCSSRYLLHHHRRRRRR-NH_2	4,838.0	4,838
FITC-MTS-H_3R_9	FITC-aca-MLSLRQSIRFFKPATRTLCSSRYLLHHHRRRRRRRRR-NH_2	5,307.2	5,307
FITC-GA-MTS-H_3R_6	FITC-aca-K(gallic acid)MLSLRQSIRFFKPATRTLCSSRYLLHHHRRRRRR-NH_2	5,119.0	5,119
FITC-GA-MTS-H_3R_9	FITC-aca-K(gallic acid)MLSLRQSIRFFKPATRTLCSSRYLLHHHRRRRRRRRR-NH_2	5,587.5	5,586

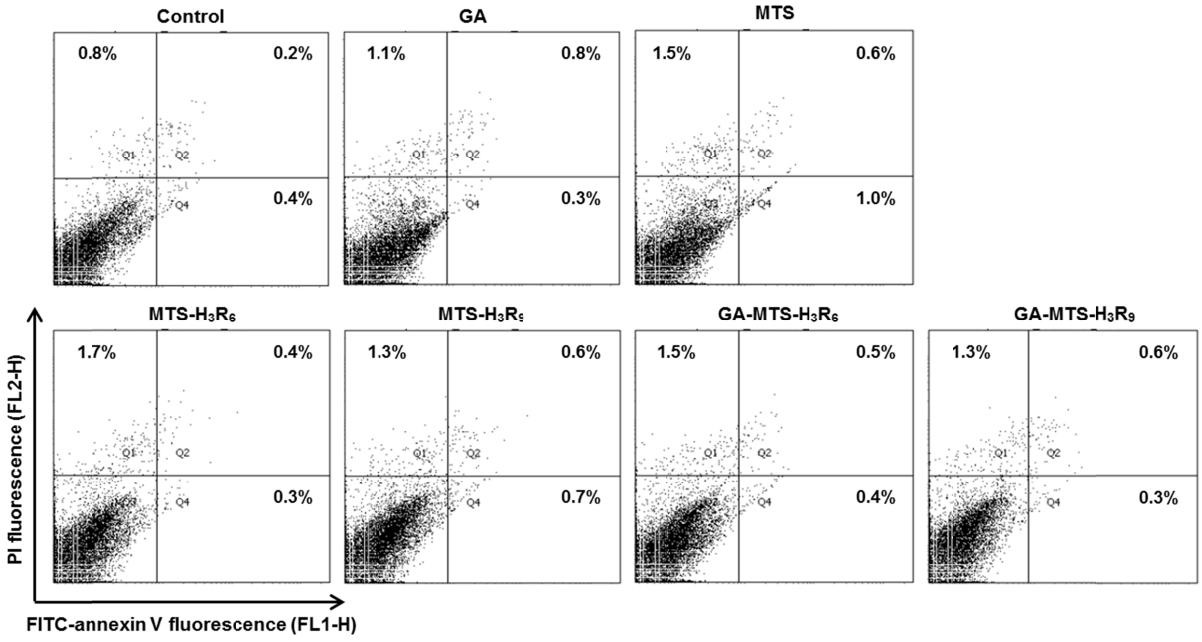
MTS, mitochondria targeting sequence; GA, gallic acid; MTS, mitochondria targeting sequensce.



Supplementary Fig. 1. Cell viability was evaluated using WST-1 and LDH assay. (A) and (B) AC16 cells were exposed to various concentrations of GA, MTS, MTS-H_3R_6, MTS-H_3R_9, GA-MTS-H_3R_6, and GA-MTS-H_3R_9 up to 2.5 μM for 24 h. Panel (A) presents the results of the WST-1 assay and Panel (B) presents the results of LDH assay. (C) AC16 cells were the same conditions as those panel (A). The Cell viability was analyzed Live/dead assay with calcein AM (green) and EthD-1 (red). The cell fluorescence images were analyzed by confocal microscopy. Scale bar is 20 μm. Data are indicted as the mean ± SD (n = 3) of three independent experiments. LDH, lactate dehydrogenase; GA, gallic acid; MTS, mitochondria targeting sequence; calcein AM, calcein acetoxymethyl ester; EthD-1, ethidium homodimer-1.



Supplementary Fig. 2. ROS levels and mitochondrial membrane potential (MMP) with GA-MTS-H_3R_9. (A) AC16 cells were exposed to 1 μM GA, MTS, MTS-H_3R_6, MTS-H_3R_9, GA-MTS-H_3R_6, and GA-MTS-H_3R_9 for 16 h. Intracellular ROS levels were assessed by GSH assay. (B) AC16 cells were treated using the same conditions as those in panel (A). The cells were added to 2 μM JC-1 and then incubated for 20 min. MMP was determined by flow cytometry analysis. Data are indicted as the mean ± SD (n = 3) of three independent experiments. ROS, reactive oxygen species; GA, gallic acid; GSH, glutathione; MTS, mitochondria targeting sequence; CCCP, carbonyl cyanide 3-chlorophenylhydrazone.



Supplementary Fig. 3. Apoptosis by GA-MTS-H_3R_9. AC16 cells were exposed to 1 μM GA, MTS, MTS-H_3R_6, MTS-H_3R_9, GA-MTS-H_3R_6, and GA-MTS-H_3R_9 for 24 h. Apoptosis levels for each group were measured by flow cytometry analysis after annexin V staining. Q1 shows necrotic cells. Q2 shows late apoptotic cells, Q3 shows intact cells, and Q4 shows early apoptotic cells. GA, gallic acid; MTS, mitochondria targeting sequence.