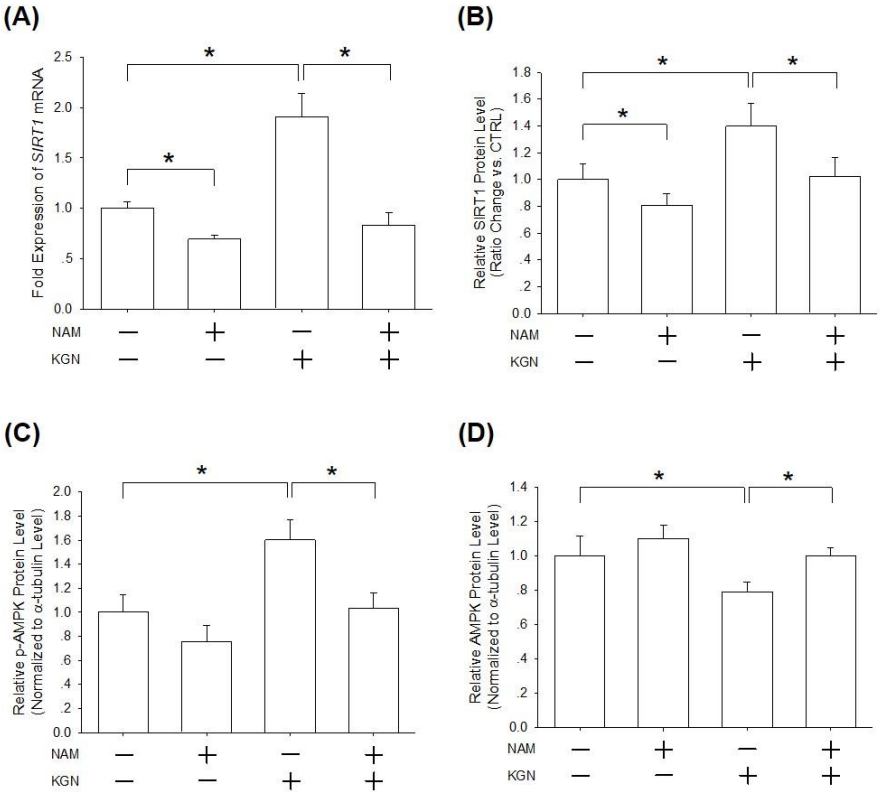
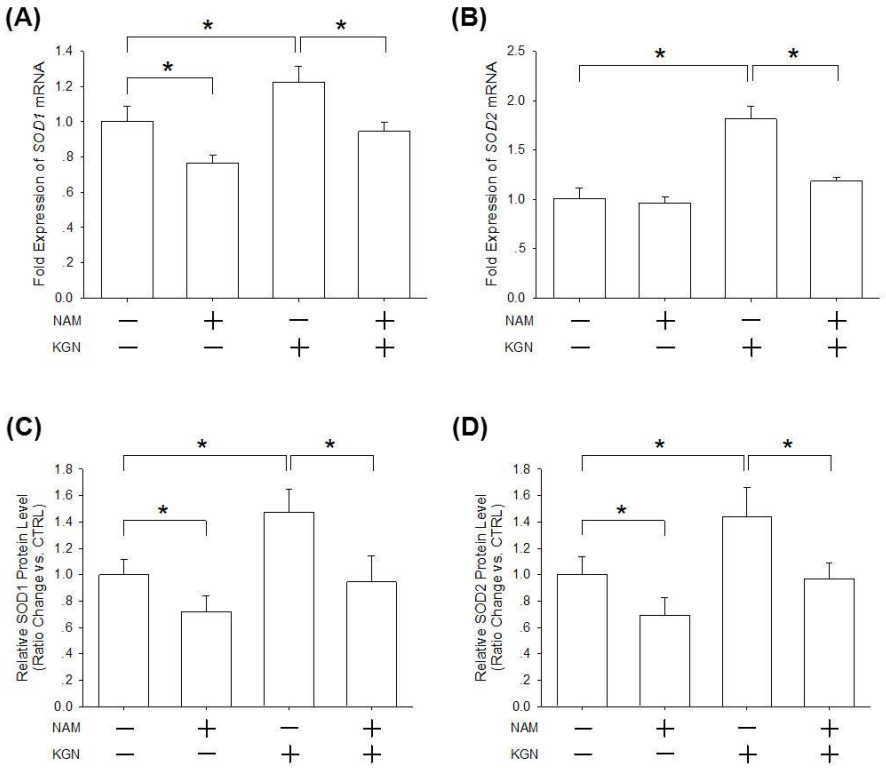
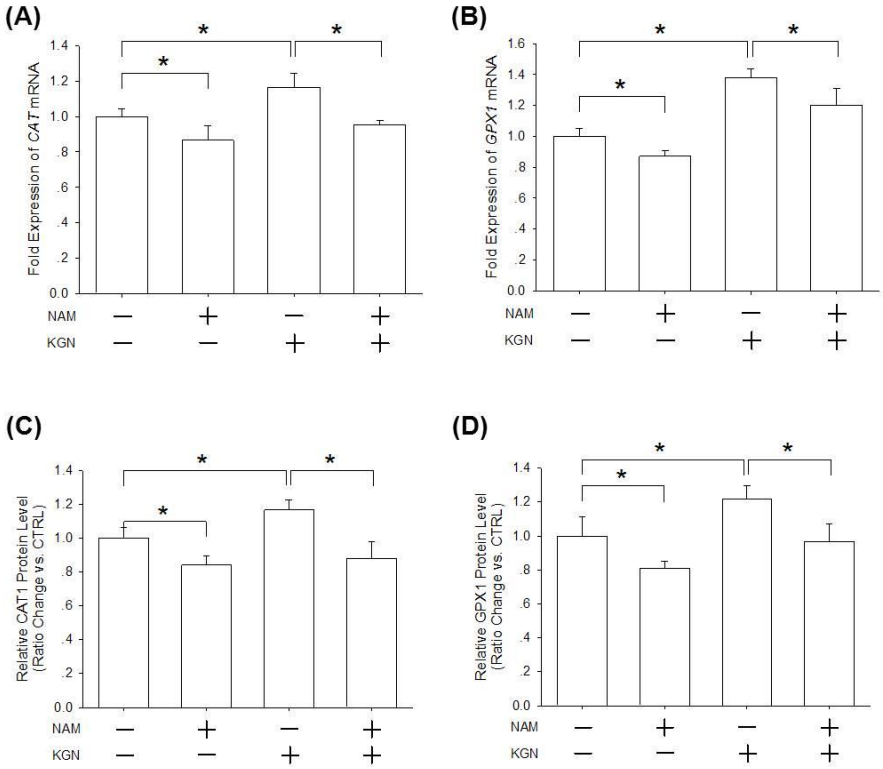


Supplementary Figure 1. Evaluation of the AMPK-SIRT1 signaling pathway in NAM-treated BM-MSCs. BM-MSCs were treated with 10 mM NAM with or without the supplementation of 10^{-6} M KGN. (A) The mRNA levels of *SIRT1* in KGN-treated or NAM-treated BM-MSCs were measured by real-time RT-PCR. Values are the mean ± S.E.M. of four independent experiments (n = 4) in real-time RT-PCR experiments. (B) The effect of NAM on the protein levels of SIRT1 in KGN-treated BM-MSCs. (C) The effect of NAM on the phosphorylated levels of AMPK in KGN-treated BM-MSCs. (D) The effect of NAM on the protein levels of AMPK in KGN-treated BM-MSCs. Values are the mean ± S.E.M. of four independent experiments (n = 4) in real-time RT-PCR experiments and of three independent experiments (n = 3) in western blot assays. Statistically significant differences are indicated by * where $p < 0.05$ between the indicated groups.



Supplementary Figure 2. The effect of NAM on the mRNA and protein levels of superoxide dismutases. BM-MSCs were treated with 10 mM NAM with or without the supplementation of 10^{-6} M KGN. (A-B) The mRNA levels of *SOD1* (A) and *SOD2* (B) were measured by real-time RT-PCR. (C-D) The protein levels of SOD1 (C) and SOD2 (D) were measured by western blot assays. Values are the mean ± S.E.M. of four independent experiments (n = 4) in real-time RT-PCR experiments and of three independent experiments (n = 3) in western blot assays. Statistically significant differences are indicated by * where $p < 0.05$ between the indicated groups.



Supplementary Figure 3. The effect of NAM on mRNA and protein levels of CAT and GPX1. BM-MSCs were treated with 10 mM NAM with and without the supplementation of 10^{-6} M KGN. (A-B) The mRNA levels of *CAT* (A) and *GPX1* (B) were measured using real-time RT-PCR. (C-D) The protein levels of CAT (C) and GPX1 (D) were measured using western blot assays. Values are the mean ± S.E.M. of four independent experiments (n = 4) in real-time RT-PCR experiments and three independent experiments (n = 3) in western blot assays. Statistically significant differences are indicated by * where $p < 0.05$ between the indicated groups.