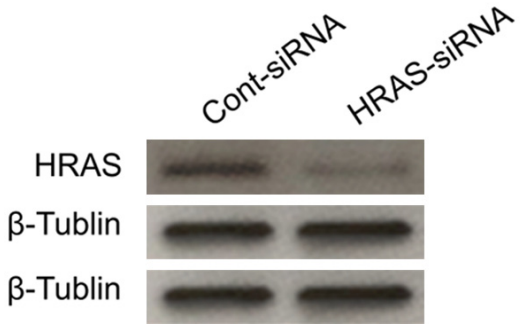
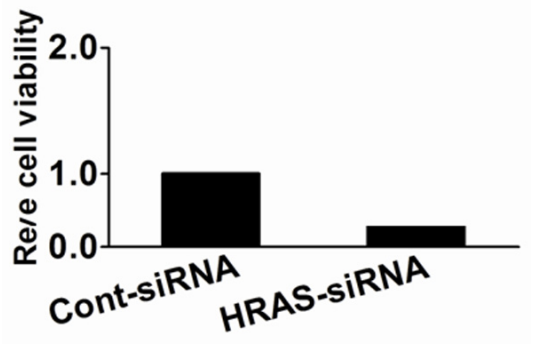
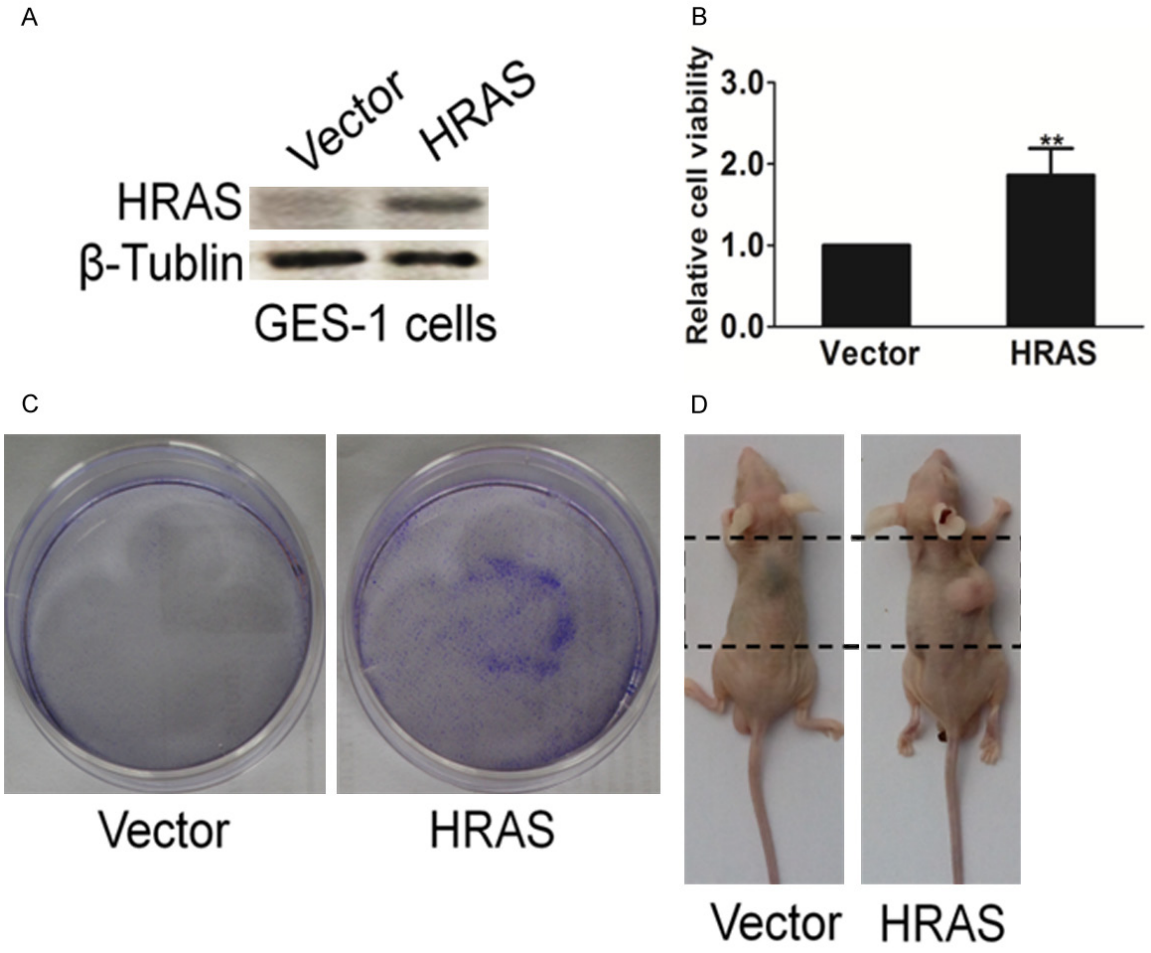


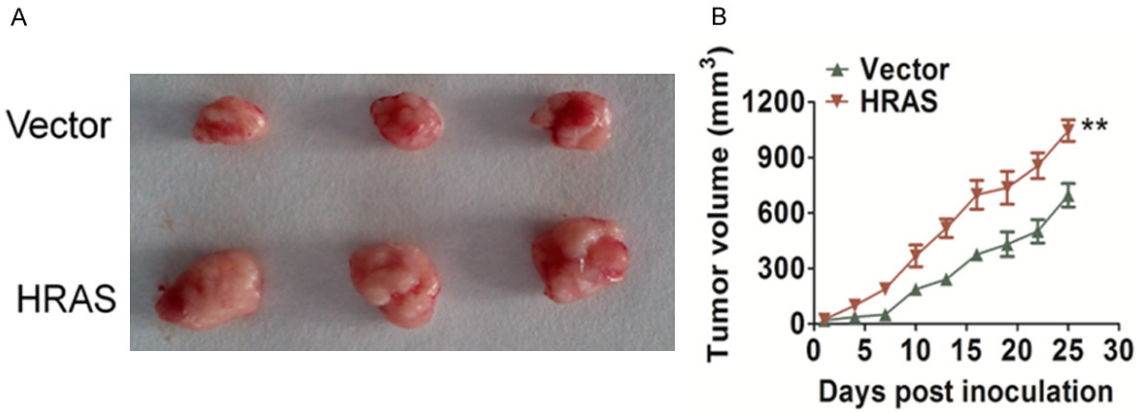
Supplementary Figure 1. Control siRNA or siRNA against HRAS were transfected into MKN28 cells (0.15 μg siRNA per well). After 24 h post transfections, cells were subjected to western blot assay for measuring HRAS.



Supplementary Figure 2. Control siRNA or siRNA against HRAS were transfected into MKN28 cells (0.15 μg siRNA per well). After 24 h post transfections, cells were subjected to cell proliferation assay. The data are presented as mean ± SD. For indicated comparisons, $*P < 0.05$, $**P < 0.01$.



Supplementary Figure 3. Over-expression of HRAS confers GSE-1 cells potentially carcinogenic. A. HRAS was cloned into vector and transfected into GSE-1 cells. The cells transfected with an empty vector were used as control. The transfection efficiency was evaluated by the expression of HRAS using western blotting analysis. B. Overexpression of HRAS promoted GSE-1 cells proliferation. Cells were treated as above and cell viability was determined by MTT assay. For indicated comparisons, $^{**}P < 0.01$. C. Representative Results of the colony numbers of GSE-1 cells. D. BALB/c-nu mice were subcutaneously injected with vector or /HRAS-overexpression GSE-1 cells. Tumor volume and weight were monitored over time as indicated, and the tumor was excised after 25 days. HRAS over-expression causes an increase in tumor volume. Data are the means ± S.E.M, n = 3 mice in each group.



Supplementary Figure 4. HRAS facilities tumor growth in vivo. A. HRAS over-expression causes an increase in tumor volume. BALB/c-nu mice were injected subcutaneously with MKN28 cells stably expressing vector or HRAS. Tumor volume and weight were monitored over time as indicated, and the tumor was excised after 25 days. B. Tumor growth curve upon implantation. Data are the means ± S.E.M, n = 3 mice in each group. Asterisk indicated significant difference when compared to the vector group (**$P < 0.01$).