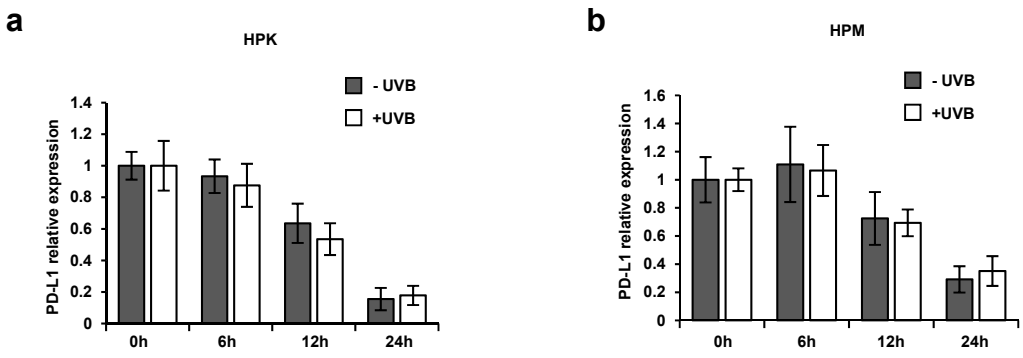
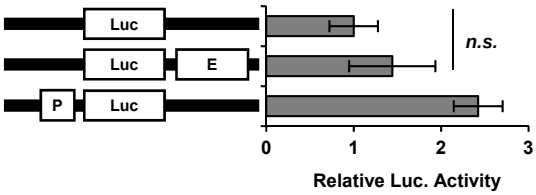
Supplementary Figure 1



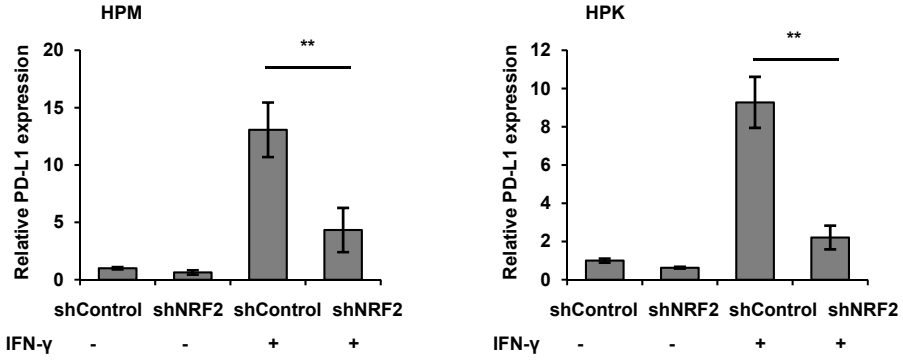
Supplementary Figure 1.
PD-L1 mRNA stability is not altered by UVB. (**a**) HPKs and (**b**) HPMs were incubated with actinomycin D (10 nM) for one hour and then irradiated with UVB (100 J/m^2) or not. 1×10^6 cells were collected at 0, 6, 12 and 24 hours. PD-L1 mRNA was assayed by qRT-PCR with β-actin as a loading control. The mRNA level at 6, 12 and 24 hours was normalized relative to 0 hour time point in each group. No significant differences of PD-L1 mRNA level changes were observed between UVB-treated and non-treated groups.

Supplementary Figure 2

a

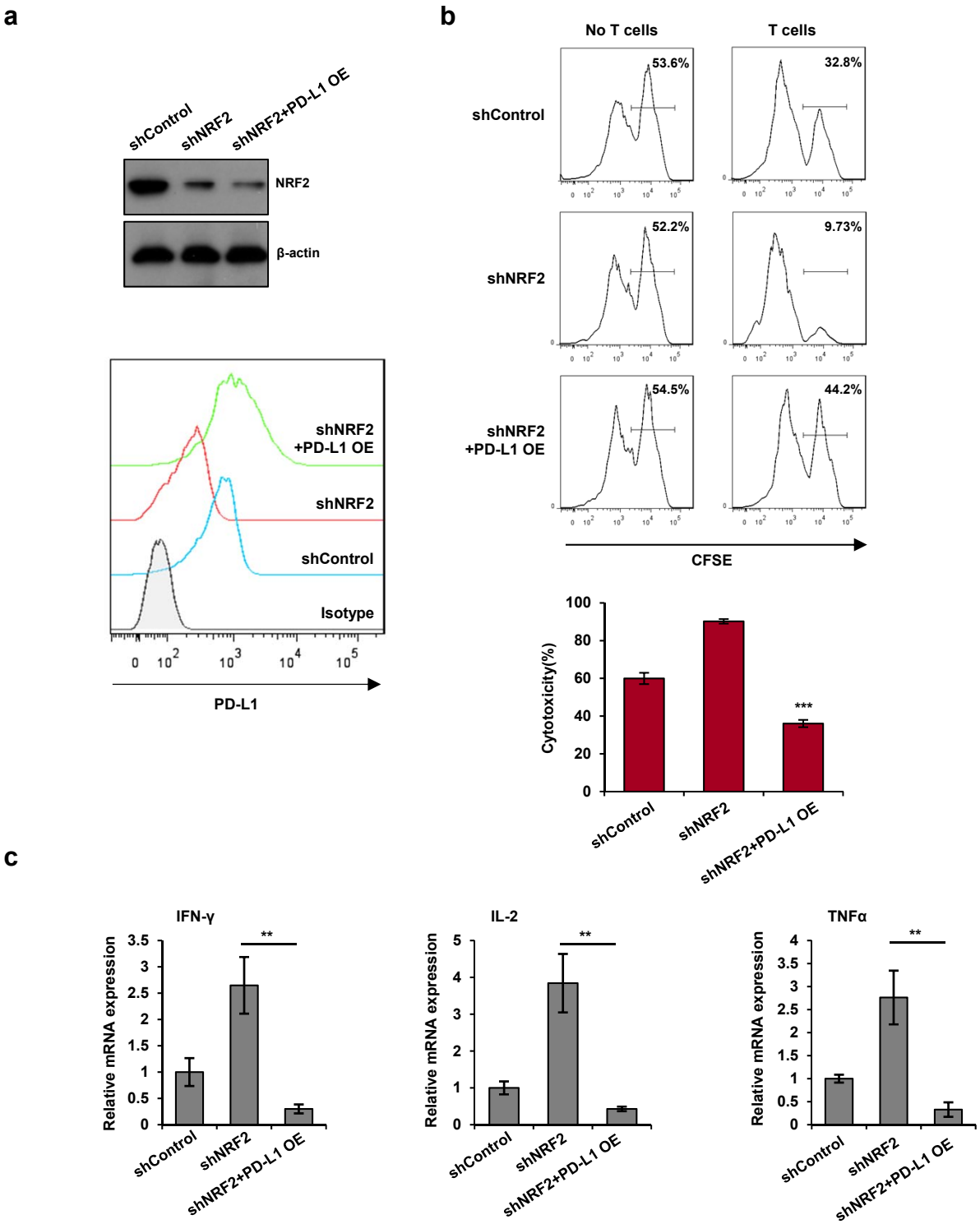


b



Supplementary Figure 2.
NRF2 modulates the IFN-γ-induced PD-L1 upregulation. (**a**) NRF2-activated PD-L1 promoter was measured with luciferase assay in the HKE293T cells. Constructs included basic pGL3 vector, pGL3 vector with PD-L1 promoter (-281/+43) only on the upstream of luciferase gene, and pGL3 vector with enhancer only including NRF2 binding site (+1932/+1948) cloned downstream of luciferase gene. All values were normalized against pGL3 basic vector sample. Three independent experiments were performed. (**b**) HPM and HPK cells with NRF2 silencing were treated with IFN-γ (100 IU/mL) stimulation for detection of PD-L1 induction with RT-qPCR. *n.s.* represents no significance.**$p<0.01$ and ***$p<0.001$.

Supplementary Figure 3



Supplementary Figure 3.
T cell activity repression by NRF2 depends on PD-L1 upregulation. (**a**) NRF2 knockdown and PD-L1 overexpression in B16 cells was detected with western blot and flow cytometry assays, respectively. (**b**) Target cells of indicated B16 cells and LLC (control) cells were labeled with high and low concentration of CFSE, respectively, which was followed with co-culture with activated Pmel-1 T cells for 5 hours. Histogram plots showing cytotoxicity of Pmel-1 T cells on target melanoma cells with quantification was shown. (**c**) The activated Pmel-1 T cells co-cultured with B16 as indicated were assayed for the transcript level of IFN-γ, IL-2 and TNFα with RT-qPCR assay. *n.s.* represents no significance.