



Fig. S6 Recruitment of NHEJ factors in ERCC6L2 deficiency. **a** Relative fluorescent intensity of ERCC6L2 at DNA damage sites in MEFs of the indicated genotypes. Observed cell numbers (n) are listed. Data are represented as mean ± SEM. A *t*-test was performed as described in the method. ns: $p > 0.05$. **b** Representative recruitment images of indicated protein in *ERCC6L2*^{-/-} and isogenic U2OS cells. **c** Summary of indicated protein recruitment to DNA damage sites in *ERCC6L2*^{-/-} and isogenic U2OS cells. A *t*-test was performed as described in the method and *p* values are labeled. ns: $p > 0.05$. **d** Recruitment of XRCC4 to DNA damage sites in WT and ERCC6L2-deficient MEFs. Upper, total micro-irradiated cell numbers are listed alone with numbers of cells showed detectable GFP-XRCC4

accumulation. Percentage of cells with GFP-XRCC4 accumulation are showed in parenthesis. Lower, relative GFP-XRCC4 intensity at DNA damages are calculated. A *t*-test was performed as described in the method. ns: $p>0.05$. ***: $p<0.001$.

e Fluorescence intensities of GFP-MRI, GFP-Lig4 and mCherry-XRCC4 were quantified. Two-tail unpaired *t*-test was performed. ns: $p>0.05$. **f** Recruitment of XLF to DNA damage sites in WT and ERCC6L2-deficient MEFs. Relative GFP-XLF intensity at DNA damages are calculated. A *t*-test was performed as described in the method. ns: $p>0.05$.