



**SUPPLEMENTARY FIG. S4.** Supplemental data of *RANKL* activation and cytotoxicity analysis in HEK293T cells. (A) Detailed design of sgRNAs used for the activation of *RANKL*, related to Figures 3A and B. (B) Dose response of the vectors transfected (50 ng vs. 100 ng in total), related to Figure 3C. Data are shown as the mean  $\pm$  S.D. ( $n=4$ ). (C) Viability of the cells transfected with the vectors shown at the left. Data are shown as the mean  $\pm$  S.D. ( $n=4$ ).  $**p < 0.01$ ,  $*p < 0.05$ . (D) Comparison of activity between the MS2-22sTag (TREE) and dCas9-22sTag systems, by reporter assay. For dCas9-4 $\times$  and 8 $\times$  22sTag, sgRNAs without MS2 stem loops were used instead of sgRNA2.0. Data are shown as the mean  $\pm$  S.D. ( $n=4$ ). N.S., not significant.