

In this study, we have two directive evidences to show *Ihh* was efficiently knockdown: 1) the growth plate closure was evidenced when tamoxifen (TM) was admitted at 2-month-old animals but not in oil treated groups (supplemental Fig. 1); 2) Real time PCR indicated half of *Ihh* was knockdown in the TM animals compared to the oil control group (Fig. 2B). These directive evidences suggests that TM administration in 2-month-old animals could efficiently knockdown *Ihh*.

A 2 months after TM



B 2 months after oil



Suppl Fig 1. Growth plate closed after tamoxifen (TM) injection. (A) TM induced deletion of *Ihh*, resulting in growth plate closure (indicated by arrow). (B) Normal growth plate after oil injection is indicated by arrow head.