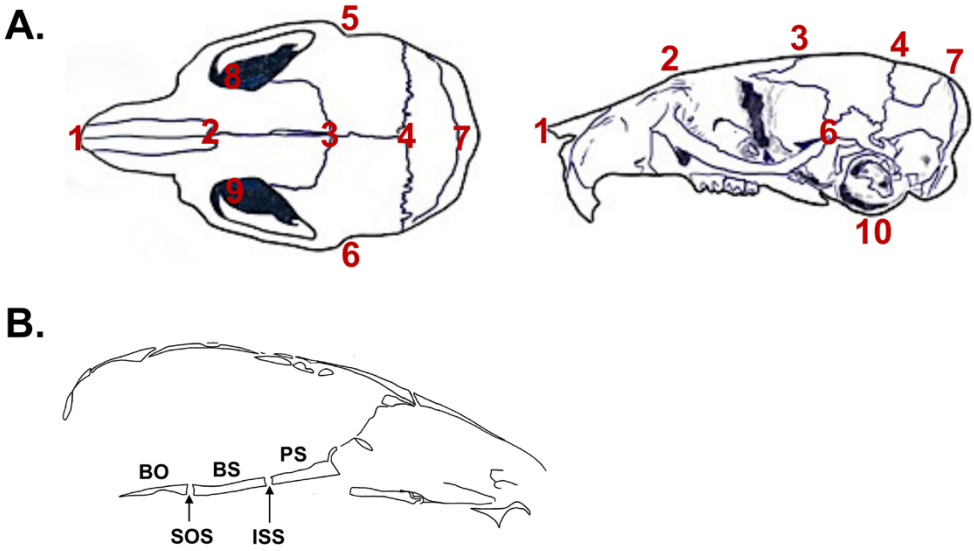
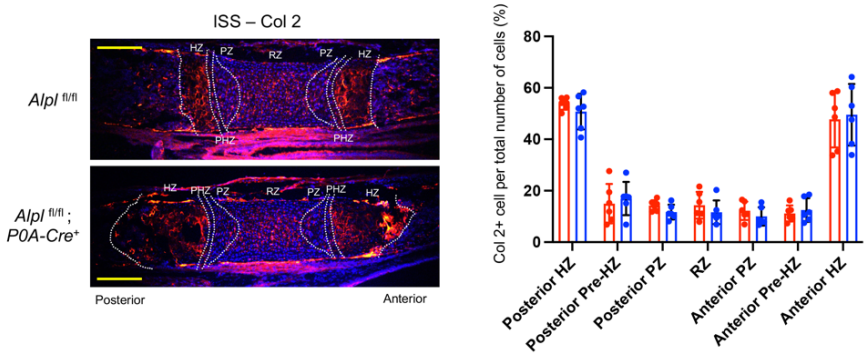
Supplemental Figure 1. Landmarks used for whole skull and cranial base linear distance measurements. (A) Craniofacial skeletal landmarks: 1 = nasale, 2 = nasion, 3 = bregma, 4 = pari, 5,6 = joining of squamosal body to zygomatic process of squamous portion of temporal bone, 7 = paro, 8,9 = intersection of frontal process of maxilla with frontal and lacrimal bones (inner canthal distance), 10 = inferior portion of the spheno-occipital synchondrosis. **(B)** Illustration of the cranial base: PS presphenoid bone; BS = basisphenoid bone; BO = basioccipital bone; SOS = spheno-occipital synchondrosis; ISS = intersphenoid synchondrosis.



Supplemental Figure 2. Col II expression is not altered in the ISS of *Alpl*$^{fl/fl}$;*P0-Cre*$^{+}$ mice. Quantification of immunofluorescent staining for collagen 2 revealed no differences in any chondrocyte zones of *Alpl*$^{fl/fl}$;*P0-Cre*$^{+}$ as compared to *Alpl*$^{fl/fl}$ mice.



Supplemental Figure 3. No differences in ISS between neonatal *Alpl*$^{fl/fl}$;*P0-Cre*$^{+}$ and control mice. Quantification of chondrocyte zones by H&E staining revealed no qualitative or quantitative differences between *Alpl*$^{fl/fl}$;*P0-Cre*$^{+}$ as compared to *Alpl*$^{fl/fl}$ mice.