



**Figure S1.** Phenotypes apparent in aged Barx2 null mice on the outcrossed and inbred (C57Bl/6) backgrounds. By 15-18 months of age, Barx2<sup>-/-</sup> mice display hunched backs, splayed-limb stance, disheveled coats and mild alopecia. The phenotypes are typically worse on the C57Bl/6 background (bottom panel). Wildtype and heterozygous mice do not show these signs of musculoskeletal aging until at least 24 months.