



FIGURE 11.23. Molecular distinctions between forelimbs and hindlimbs. (A) *Tbx5* is expressed (blue staining) in the mouse forelimb (outlined in pink), but not the hindlimb (outlined in green). The reverse is true for *Tbx4* and *Pitx1*. (B) On the left is a wild-type mouse skeleton and on the right is a *Pitx1* mutant mouse skeleton (position of the hindlimb indicated by the arrow in the wildtype and asterisk in the mutant). (C) Isolated forelimb and hindlimb bones from wild-type and *Pitx1* mutant mice. Deletion of the *Pitx1* has no effect on the forelimbs but results in the reduction of the size of the hindlimb. (D) The effect of *Pitx1* deletion is left–right asymmetric, and the effect is further enhanced by also removing one copy of the closely related *Pitx2* gene. In the *Pitx1*^{-/-} *Pitx2*^{+/-} embryo, both left and right hindlimbs are reduced, but the effect is always much more severe for the right hindlimb.

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