

Figure S1 Pterygoid-parasphenoid joint cut in frontal plane at E15.0. Toluidine blue staining. Panel **b** shows a higher-magnification view of the rectangular area in **a**. The palatoquadrate cartilage (PQC) and parasphenoid cartilaginous pad (PCP) faced each other with an intervening interzone (IZ). No artificial space was seen. True secondary cartilage was formed within the pterygoid bone (arrow in **b**). PB: pterygoid bone PSB: parasphenoid bone. Scale bars: 100 μ m.

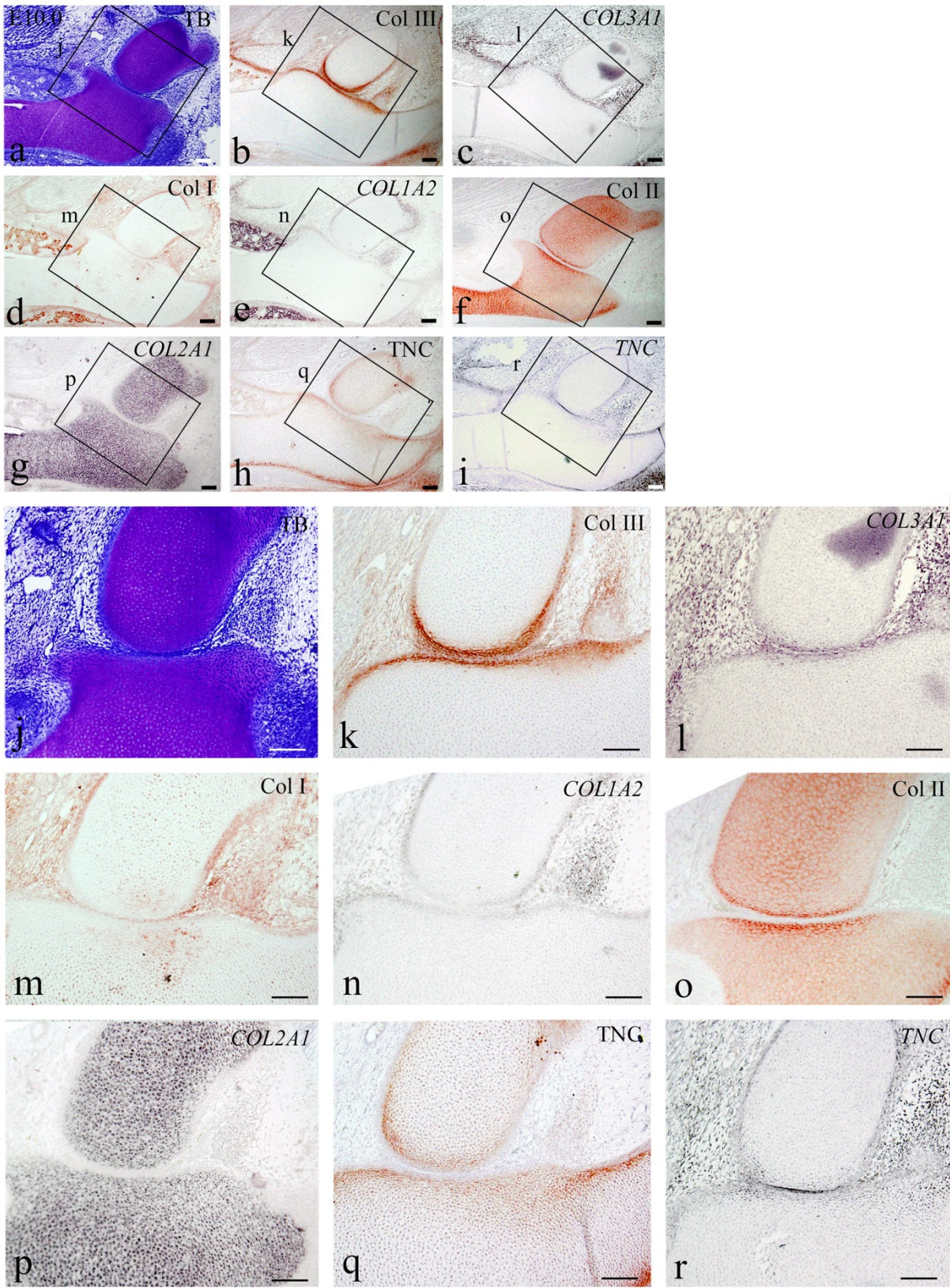


Figure S2 Quadratomandibular joint cut in sagittal plane at E10.0. Toluidine blue staining (**a, j**) and immunohistochemistry analysis of type III collagen (**b, k**), type I collagen (**d, m**), type II collagen (**f, o**), and tenascin-C (**h, q**) expression. *In situ* hybridization analysis of *COL3A1* (**c, l**), *COL1A2* (**e, n**), *COL2A1* (**g, p**), and *TNC* (**i, r**) expression. Panels **j-r** show higher-magnification views of the rectangular areas in **a-i**, respectively. Expression patterns were similar to those at E8.0 (Figure 5). Scale bars: 100 μ m.

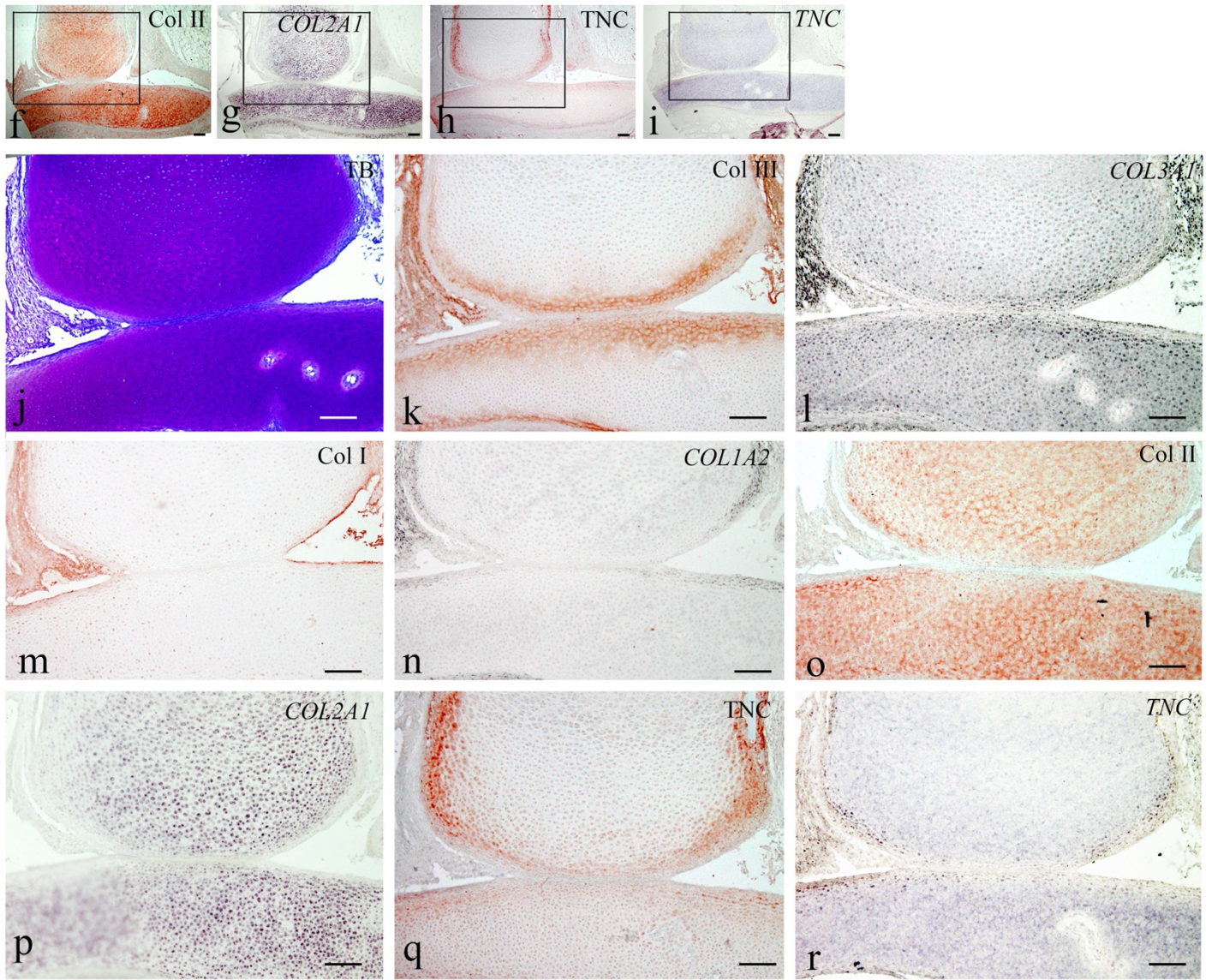


Figure S3 Quadratomandibular joint cut in the sagittal plane at E20.0. Toluidine blue staining (**a, j**) and immunohistochemistry analysis of the expression of type III collagen (**b, k**), type I collagen (**d, m**), type II collagen (**f, o**), and tenascin-C (**h, q**). *In situ* hybridization analysis of *COL3A1* (**c, l**), *COL1A2* (**e, n**), *COL2A1* (**g, p**), and *TNC* (**i, r**) expression. Panels **j-r** show higher-magnification views of the rectangular areas in **a-g**, respectively. Expression patterns were similar to those at E15.0 (Figure 6). Scale bars: 100 μ m.

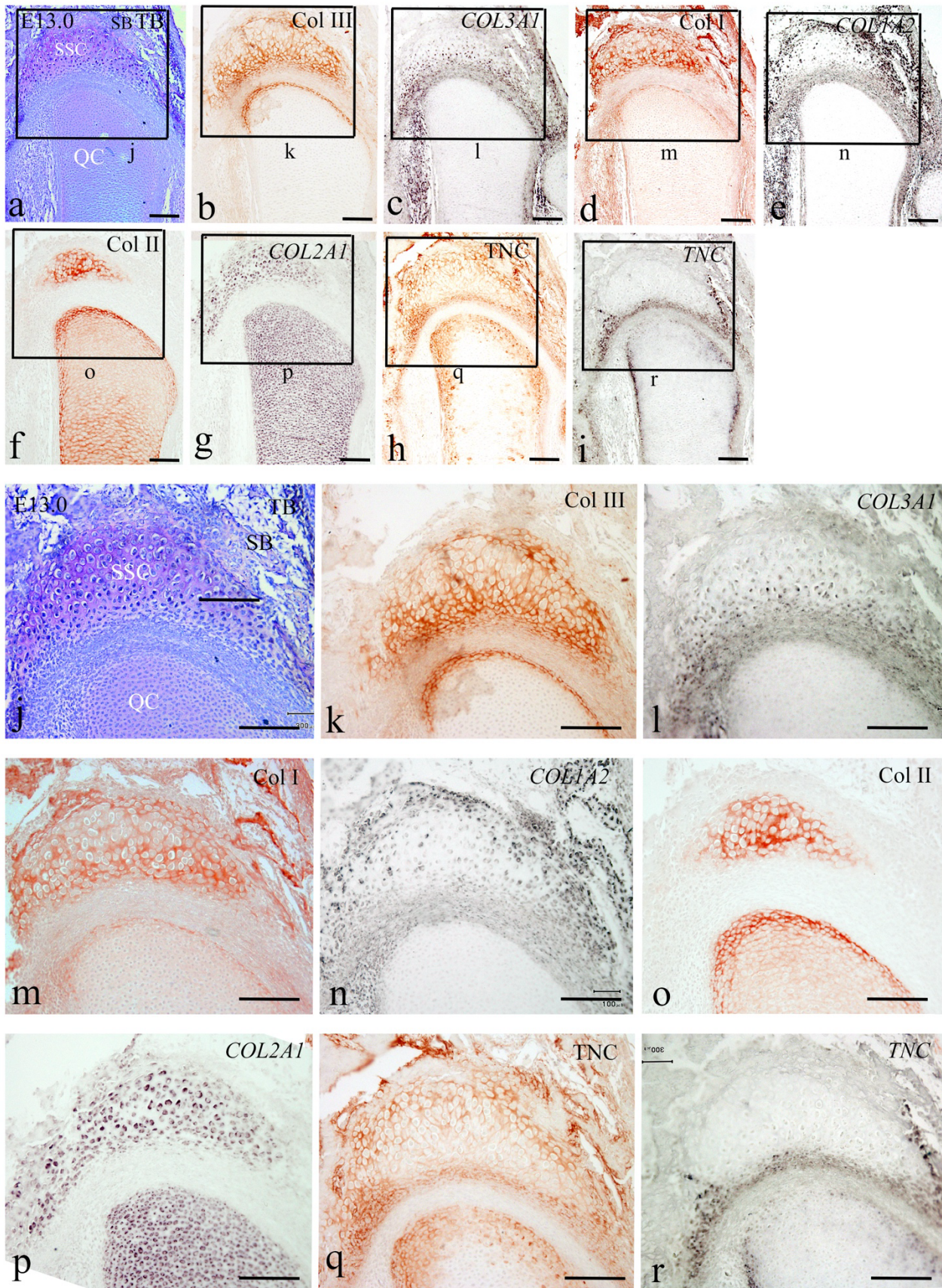


Figure S4 Quadratosquamosal joint cut in the tilted horizontal plane at E13.0 Toluidine blue staining (**a, j**) and immunohistochemistry analysis of type III collagen (**b, k**), type I collagen (**d, m**), type II collagen (**f, o**), and tenascin-C (**h, q**) expression. *In situ* hybridization analysis of *COL3A1* (**c, l**), *COL1A2* (**e, n**), *COL2A1* (**g, p**), and *TNC* (**i, r**) expression. Panels **j-r** show higher-magnification views of the rectangular areas in **a-i**, respectively. The squamosal secondary cartilage (SSC) increased in volume. Expression patterns were similar to those at E11.0 (**Figure 7**). QC: quadrato cartilage. Scale bars: 100 μ m.