Expression of fibroblast growth factor 10 and its receptor, fibroblast growth factor receptor 2B, in the bovine corpus luteum.

There is evidence that several fibroblast growth factors (FGFs) are involved in growth and development of the corpus luteum (CL), but many FGFs have not been investigated in this tissue, including FGF10. The objective of this study was to determine if FGF10 and its receptor (FGFR2B) are expressed in the CL. Bovine CL were collected from an abattoir and classed as corpus hemorrhagica (stage I), developing (stage II), developed (stage III), and regressed (stage IV) CL. Expression of FGF10 and FGFR2B mRNA was measured by reverse transcription-polymerase chain reaction (RT-PCR). Both genes were expressed in bovine CL, and FGF10 expression did not differ between stages of CL development. FGF10 protein was localized to large and small luteal cells by immunohistochemistry. FGFR2B expression was approximately threefold higher in regressed compared to developing and developed CL (P<0.05).