

Differential regulation of collagen secretion by kinin receptors in cardiac fibroblast and myofibroblast

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Kinins mediate their cellular effects through B1 (B1R) and B2 (B2R) receptors, and the activation of B2R reduces collagen synthesis in cardiac fibroblasts (CF). However, the question of whether B1R and/or B2R have a role in cardiac myofibroblasts remains unanswered. Methods: CF were isolated from neonate rats and myofibroblasts were generated by an 84h treatment with TGF- β 1 (CMF). B1R was evaluated by western blot, immunocytochemistry and radioligand assay; B2R, inducible nitric oxide synthase (iNOS), endothelial nitric oxide synthase (eNOS), and cyclooxygenases 1 and 2 (COX-1, and COX-2) were evaluated by western blot; intracellular Ca⁺² levels were evaluated with Fluo-4AM; collagen secretion was measured in the culture media using the picrosirius red assay kit. Results: B2R, iNOS, COX-1 and low levels of B1R but not eNOS, were detected by western blot in CF. Also, B1R, B2R, and COX-2 but not iNOS, eNOS or COX-1, were detected by western blot in CMF. By immunocytochemistry, our result