



Luteinizing hormone receptor splicing variants in bovine Leydig cells

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ABSTRACT. The luteinizing hormone receptor (LHR) plays a key role in testosterone production through its interaction with the gonadotropins, LH and chorionic gonadotropin. We examined the *LHR* splicing pattern in bovine Leydig cells; LH-induced expression of eight cloned splicing variants was detected by real-time PCR. Luteinizing hormone applied to cultured Leydig cells resulted in expression of full-length LHR and the A and B isoforms, as well as secretion of testosterone, which first increased, then declined, and then increased further, with increased LH levels. The secretion of testosterone progressively increased with increasing LH, but the expression levels of LHR (FL, A, and B) did not increase correspondingly. We conclude that the LHR splicing pattern is complex in bovine Leydig cells, and that expression of full-length LHR and isoforms A and B changes when induced with LH.

Key words: Bovine; Leydig cells; LHR; Splicing variants