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JOURNAL ARTICLE

Seminal vesicles are novel sites of luteinizing hormone/human chorionic gonadotropin-receptor gene expression

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The hypothesis that rat seminal vesicles may contain luteinizing hormone (LH)/human chorionic gonadotropin (hCG) receptors was tested by means of a number of different techniques. Northern blotting demonstrated that rat seminal vesicles contained multiple LH/hCG-receptor transcripts. In situ hybridization revealed that these transcripts were present primarily in the principal epithelial cells lining the lumen. Western immunoblotting detected proteins, two of which disappeared (80 and 46 kDa) and another of which decreased (30 kDa) after preabsorption of the receptor antibody with excess receptor peptide. Ligand blotting showed that 125I-hCG could bind only to an 80-kDa protein and that this binding was inhibited by coincubation with excess unlabeled hCG. Immunocytochemistry demonstrated that LH/hCG-receptor protein was present primarily in the principal epithelial cells. In conclusion, our data demonstrate that seminal vesicles contain LH/hCG receptors, thus making this previously unsuspected male accessory reproductive organ a potential target of direct regulation by LH.

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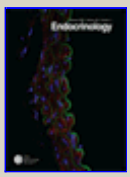

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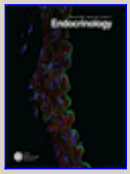

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