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JOURNAL ARTICLE

The heterogeneity of rat androgen binding protein (rABP) in the vascular compartment differs from that in the testicular tubular lumen. Further evidence for bidirectional secretion of rABP

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Fractionation of testicular extracts and serum on a Concanavalin A-Sepharose column resolved two peaks of immunoreactive rat androgen binding protein. The rat androgen binding protein in the first peak, designated Form I, was present in the void volume; the other, designated Form II rat androgen binding protein, was bound by the column and specifically eluted by alpha-methylmannoside. In the course of studying the heterogeneity of rat androgen binding protein on Concanavalin A-Sepharose, it was observed that the distribution of the two forms of this protein was similar in the fluid obtained by micropuncture from the seminiferous tubule and the rete testis, that is, the ratios of Form I to Form II were 1:1 and 1:1.8, respectively. By contrast, Form I rat androgen binding protein in blood, interstitial fluid, and thoracic duct lymph of adult rats was reduced relative to Form II; the ratios of Form I:Form II in these fluids were 1:4.4, 1:3.1, and 1:4.6, respectively. since previous studies indicated that the reduced amount of Form I relative to Form II observed in the blood of adult rats was not the result of more rapid clearance of Form I, these results suggest that Form I rat androgen binding protein is preferentially secreted into the lumen of the seminiferous tubule rather than into the interstitial fluid and blood. We conclude that Sertoli cells in adult rats may partition rat androgen binding protein between the interstitial and luminal compartments of the testis based on the carbohydrate composition of this protein.

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