

Journal of Andrology, Vol 18, Issue 6 595-601, Copyright © 1997 by The American Society of Andrology

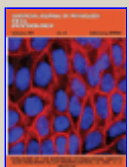
JOURNAL ARTICLE

Regional distribution of 5alpha-reductase type 1 and type 2 mRNA along the nonhuman primate (*Macaca fascicularis*) epididymis

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The 5alpha-reduced metabolites of testosterone, including dihydrotestosterone, are considered the primary regulators of epididymal function. Two genes encode two 5alpha-reductase isozymes. We examined 5alpha-reductase type 1 and type 2 mRNA tissue distribution and relative abundance in cynomolgus monkey (*Macaca fascicularis*) testicular and epididymal tissues using semiquantitative reverse transcriptase-polymerase chain reaction (RT-PCR). mRNA extracted from monkey tissues including the testis (T) and the proximal caput (PCp), the caput (Cp), the midcorpus (Co), and the distal cauda (Cd) epididymis was reverse transcribed to produce cDNAs. 5alpha-reductase type 1 and 2 cDNAs were subsequently coamplified with the housekeeping gene, cyclophilin, in a PCR spiked with 33P-dCTP. Relative abundance was reported as the cpm ratios of type 1 or type 2/cyclophilin mRNA. Semiquantitative RT-PCR results indicated that type 1 mRNA was most abundant in the testis (0.48 +/- 0.06) and significantly decreased distally along the monkey epididymis (PCp: 0.29 +/- 0.04; Cp: 0.29 +/- 0.04; Co: 0.21 +/- 0.03; Cd: 0.07 +/- 0.01) ($P < 0.001$). Type 2 mRNA was undetectable in the testis but was present throughout the epididymis at uniform levels (PCp: 1.6 +/- 0.2; Cp: 1.4 +/- 0.3; Co: 1.6 +/- 0.2; Cd: 1.5 +/- 0.2). These data demonstrate that 5alpha-reductase type 1 mRNA is differentially expressed but of low abundance along the nonhuman primate epididymis, whereas 5alpha-reductase type 2 gene expression is uniform.

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