

Constant Expression of Cyclooxygenase-2 Gene in Prostate and the Lower Urinary Tract of Estrogen-Treated Male Rats

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Expression of cyclooxygenase-2 (E. C. 1.14.99.1) in prostate and the lower urinary tract (LUT) of the neonatally estrogenized male rat has been studied by using a COX-2's PCR fragment of 724 nt spanning 3 introns and a 478nt internal standard for quantitative RT-PCR. The same fragment of 724 nt was used for RNA probe in Northern hybridization. Neonatal estrogenization (10 µg/day of diethylstilbestrol on days 1-5) had no effect on COX-2 expression in prostatic urethra, prostatic lobes, or bladder. Acute estrogen treatment of castrated animals did not induce COX-2 expression, either. In addition the differential expression of basal level of COX-2 in the different lobes of prostate in normal rat was demonstrated. Our results suggest a constant expression of COX-2 gene in prostate and the lower urinary tract of the neonatally estrogenized (neoDES) rats. The present study indicates that the increased expression of COX-2 is probably not essential for the estrogen-driven development of stromal inflammation or hyperplastic and dysplastic alterations in the prostate of neoDES rats.