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JOURNAL ARTICLE

Androgen-Dependent transcriptional regulation of the prostate-specific antigen gene by thyroid hormone 3,5,3'-L-triiodothyronine

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Prostate-specific antigen (PSA) is the most useful biomarker for human prostate cancer and may play a role in prostate tumor biology. Androgens, via their receptors, are the major positive regulators of PSA expression. Recently, we showed that thyroid hormone 3,5,3'-L-triiodothyronine (T3) also increases androgen-dependent PSA expression, even though androgen receptor expression is not affected. This report demonstrates for the first time that there is a functional T3-responsive element (TRE) in the 5'-promoter region of the PSA gene. Mutation of this TRE reduced the T3-enhanced androgenic activation of the PSA promoter. Our study provides direct evidence that the PSA gene is regulated by T3 at the transcriptional level.

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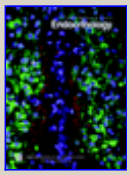

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