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## JOURNAL ARTICLE

# Characterization of a TPA-response element in the 5' -flanking region of the androgen receptor gene

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The androgen receptor (AR) protein is an important transacting factor that is necessary for mediating gene expression of androgen-responsive genes. The expression of the AR gene is regulated by androgens and agents that utilize the calcium, protein kinase A, and protein kinase C pathways. Although the role of the calcium and protein kinase A pathways in the regulation of the AR gene has been investigated, the mechanism of regulation of AR through the protein kinase C pathway is not known. We have isolated the 5' -flanking region of the mouse AR gene and identified a consensus TPA (12-0-tetradecanoylphorbol 13-acetate)-response element (TRE). Transient transfection assays indicate that the TRE sequence is sufficient to confer TPA responsiveness to cells treated with TPA. Gel retardation assays and DNA footprint analysis demonstrated specific binding of the TRE and protection of the TRE sequence. Thus, these results describe a TRE in the 5' -flanking region of the AR gene and demonstrate that the TRE is responsive to TPA treatment.

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