

〈原 著〉

マウス SC-3 細胞株を用いた抗 Androgen 作用の評価

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Evaluation of Anti-Androgen Effect Using SC-3 Cells

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Abstract

It has been well known that androgens regulate the hair growth and the hair loss on the frontal and parietal scalp and top of scalp. Hormonal action is based on two events, which are intracellular reduction, of testosterone (TE) to dihydrotestosterone (DHT) by 5α -reductase, and subsequent binding of DHT to the androgen receptor. For the purpose of prevention and improvement of baldness, we focused on the blocking the binding of DHT to androgen receptor. The goals of this study are to establish a simple evaluating method of anti-androgen effect and to search new anti-androgen reagents. SC-3 cells cloned from androgen-dependent mouse mammary carcinoma (Shionogi carcinoma 115) are remarkably growth-stimulated by androgen. It has been reported that the androgen-enhanced growth is through the androgen receptor. In this study, we established the simple evaluating method of anti-androgen effects using MTT method of SC-3 cell. The method was confirmed to be able to evaluate the growth-stimulation by TE and DHT, and the anti-androgen effect by cyproterone acetate which is already known as a strong androgen receptor blocker. To search new anti-androgen reagents, we evaluated the anti-androgen effect of terpenes which have similar structures to androgens. It was found that 4 kinds of terpenes such as *cis*-jasnone, methyl dihydroisojasmonate, methyl dihydrojasmonate and dihydrojasmonate showed the anti-androgen effects.

Key words: SC-3 cell, androgen dependent cell growth, anti-androgen effect, dihydrotestosterone, MTT method.