Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Dutasteride

Catalog No: tcsc1542

Available Sizes

Size: 10mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
164656-23-9

Formula:
$C_{27}H_{30}F_6N_2O_2$

Pathway:
Metabolic Enzyme/Protease

Target:
5 alpha Reductase

Purity / Grade:
>98%

Solubility:
DMSO : 33.33 mg/mL (63.06 mM; Need ultrasonic)

Alternative Names:
GG 745;GI 198745

Observed Molecular Weight:
528.53

Product Description

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Dutasteride (GG745) is a potent inhibitor of both 5 alpha-reductase isozymes. Dutasteride may possess off-target effects on the androgen receptor (AR) due to its structural similarity to DHT.

IC50 Value:

Target: 5 alpha-reductase

in vitro: Dutasteride inhibited (3)H-T conversion to (3)H-DHT and, as anticipated, inhibited T-induced secretion of PSA and proliferation. However the drug also inhibited DHT-induced PSA secretion and cell proliferation (IC(50) approximately 1 microM). Dutasteride competed for binding the LNCaP cell AR with an IC(50) approximately 1.5 microM. High concentrations of dutasteride (10-50 microM), but not finasteride, in steroid-free medium, resulted in enhanced cell death, possibly by apoptosis [1]. Dutasteride reduces cell viability and cell proliferation in both cell lines tested (androgen-responsive (LNCaP) and androgen-unresponsive (DU145) human prostate cancer (PCa)) [2].

in vivo: GG745 has a terminal half-life of approximately 240 hr, and single doses of >10 mg decreased DHT levels significantly more than did single 5-mg doses of finasteride [3]. In placebo treated men without prostate cancer there was an 8.3% median increase in PSA at month 24 compared with -59.5% in those who received dutasteride, using doubled values to correct for dutasteride treatment [4].

Toxicity: Dutasteride may affect male fertility and steroid hormone dynamics. Therefore, a 21-day reproduction study was conducted to determine the effects of dutasteride (10, 32 and 100 μg/L) on fish reproduction. Exposure to dutasteride significantly reduced fecundity of fish and affected several aspects of reproductive endocrine functions in both males and females [5].

Clinical trial: Bioequivalence Study Of Dutasteride Five 0.1 mg And One 0.5 mg Soft Gelatin Capsules In Healthy Male Volunteers. Phase 1