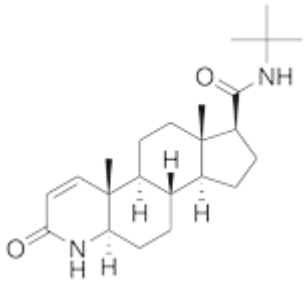
Product Name : FINASTERIDE



Product Description : Finasteride is a synthetic type II 5?-reductase inhibitor. This enzyme converts testosterone to dihydrotestosterone (DHT). Finasteride is approved for the treatment of benign prostatic hyperplasia (BPH) and male pattern baldness (MPB). Testosterone in males is produced primarily in the testicles, but also in the adrenal glands. The majority of testosterone in the body is bound to sex hormone-binding globulin (SHBG), a protein produced in the liver that transports testosterone through the bloodstream, prevents its metabolism, and prolongs its half-life. Once it becomes unbound from SHBG, free testosterone can enter cells throughout the body. In certain tissues, notably the scalp, skin, and prostate, testosterone is converted into 5?-dihydrotestosterone (DHT) by the enzyme 5?-reductase. DHT is a more powerful androgen than testosterone (as it has approximately 3-10x the potency at the androgen receptor, the site of action of the androgen hormones), so 5?-reductase can be thought to amplify the androgenic effect of testosterone in the tissues in which it's found. Finasteride, a 4-azasteroid and analogue of testosterone, works by acting as a potent and specific, competitive inhibitor of one of the two subtypes of 5?-reductase, specifically the type II isoenzyme. In other words, it binds to the enzyme and prevents endogenous substrates such as testosterone from being metabolized. 5?-reductase type I and type II are responsible for approximately one-third and two-thirds of DHT production in the

body, respectively. Finasteride selectively prevents the conversion of testosterone into DHT by the type II isoenzyme, resulting in a decrease in serum DHT levels by about 65-70% and in prostate DHT levels by up to 85-90%, where expression of the type II isoenzyme dominates. Unlike dual inhibitors of both isoenzymes of 5?-reductase which can reduce DHT levels in the entire body by more than 99%, finasteride cannot completely suppress DHT production because it lacks significant inhibitory effects on the 5?-reductase type I isoenzyme, possessing approximately 100-fold less affinity for it compared to type II. In addition to blocking the 5?-reductase type II isoenzyme. By blocking DHT production, finasteride reduces androgenic activity in the scalp, treating hair loss at its hormonal source. In the prostate, inhibition of 5?-reductase leads to a reduction of prostate volume, which improves the symptoms of benign prostatic hyperplasia (BPH) and reduces the risk of prostate cancer. Inhibition of 5?-reductase also leads to a reduction in the weight of the epididymis and a decrease in the percentage of motile and morphologically normal spermatozoa found in the epididymis.

Chemical Formula : N-(1,1-dimethylethyl)-3-oxo-(5?,17?)-4-azaandrost-1-ene-17-carboxamide

CAS No : 98319-26-7

Molecular Formula : C23H36N2O2

Molecular Weight : 372.549