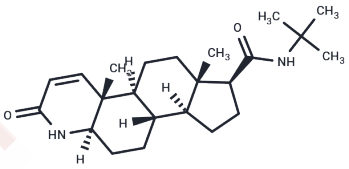
Data Sheet (Cat.No.T0488)

TargetMol

Finasteride

Chemical Properties



CAS No. : 98319-26-7

Formula: C23H36N2O2

Molecular Weight: 372.54

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Finasteride (MK-906) is an oral inhibitor of active testosterone 5-alpha-reductase and Ki value is 10 nM.
Targets(IC50)	Reductase
In vitro	After 4, 9, 14, and 21 days, rat prostates were excised to measure androgen and DNA content and to undergo histological and morphological analyses. On day 21, finasteride levels decreased by 65%. Finasteride treatment induced a dose-dependent increase in the incidence of hypospadias (penischisis) in male offspring, with a threshold dose level of approximately 0.1 mg/kg/day and a 100% effect level at 100 mg/kg/day (administered on gestational day 20). Additionally, finasteride reduced the anogenital distance in male offspring rats. After 4 days of treatment with finasteride, DNA content was almost unaffected, but a decrease of up to 52% was observed at 14 days. After prostate sections were stained, 23% of epithelial cells displayed markers of apoptotic cell death on day 14, returning to control levels by day 21. Finasteride caused 16% of epithelial cells to stain for tissue transglutaminase on day 9, with a return to baseline by day 14. Finasteride-induced staining was less intense at 4 days, peaking at 0.7% of epithelial cells and returning to control values by day 9.
In vivo	Finasteride inhibits the growth rate of prostate lymph node carcinoma cell lines in a dose-dependent manner and significantly suppresses the secretion and expression of prostate-specific antigen in LNCaP cells. It forms a ternary complex with the reduced coenzyme II of type 2 isoenzyme (Ki: 1.19 nM), which then rearranges into a high-affinity complex (E: I) with an approximate first-order rate constant of 1.62ms.

Solubility Information

Solubility	Ethanol: 37.3 mg/mL (100.12 mM),Sonication is recommended. DMSO: 64 mg/mL (171.79 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6843 mL	13.4214 mL	26.8428 mL
5 mM	0.5369 mL	2.6843 mL	5.3686 mL
10 mM	0.2684 mL	1.3421 mL	2.6843 mL
50 mM	0.0537 mL	0.2684 mL	0.5369 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Azzolina B, et al. J Steroid Biochem Mol Biol, 1997, 61(1-2), 55-64.
Bologna M, et al. Urology, 1995, 45(2), 282-290.
Wang LG, et al. Cancer Res, 1997, 57(4), 714-719.
Clark RL, et al. Teratology, 1990, 42(1), 91-100.
Rittmaster RS, et al. Endocrinology, 1995, 136(2), 741-748.