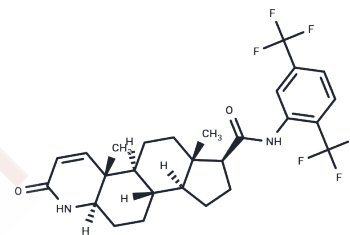


Dutasteride

Chemical Properties

CAS No. :	164656-23-9
Formula:	C ₂₇ H ₃₀ F ₆ N ₂ O ₂
Molecular Weight:	528.53
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	Dutasteride (GI 198745) is a 5-alpha-reductase inhibitor that inhibits both type-1 and type2 isoforms of the enzyme and is used to treat benign prostatic hyperplasia.
Targets(IC50)	Apoptosis,Reductase
In vitro	In healthy male rats, daily treatment with Dutasteride (100mg/kg) resulted in a prostate size that was half the size of that in control rats.
In vivo	Dutasteride effectively inhibits Type I 5AR (IC ₅₀ =6 nM) and Type II 5AR (IC ₅₀ =7 nM). In LNCaP cells (IC ₅₀ =1 μM), it suppresses DHT-induced PSA secretion and proliferation, and competes for androgen receptor (AR) binding (IC ₅₀ =1.5 μM). Additionally, dutasteride reduces cell viability and proliferation in both androgen-responsive (LNCaP) and androgen-nonresponsive (DU145) human prostate cancer (PCa) cell lines.

Solubility Information

Solubility	Ethanol: 6 mg/mL (11.35 mM),Sonication is recommended. H ₂ O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 44.5 mg/mL (84.2 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 2.5 mg/mL (4.73 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.892 mL	9.4602 mL	18.9204 mL
5 mM	0.3784 mL	1.892 mL	3.7841 mL
10 mM	0.1892 mL	0.946 mL	1.892 mL
50 mM	0.0378 mL	0.1892 mL	0.3784 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

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Luo D, Han L, Gao S, et al. *LINCS Dataset-Based Repositioning of Dutasteride as an Anti-Neuroinflammation Agent. Brain Sciences*. 2021, 11(11): 1411.

Lazier CB, et al. *Prostate*, 2004, 58(2), 130-144.

Biancolella M, et al. *Invest New Drugs*, 2007, 25(5), 491-497.

Schmidt LJ, et al. *Prostate*, 2007, 67(10), 1111-1120.

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