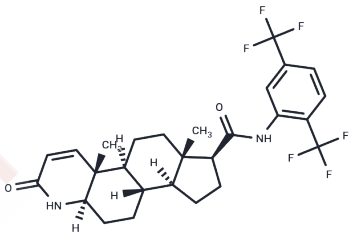
Data Sheet (Cat.No.T1499)

TargetMol

Dutasteride

Chemical Properties



CAS No. : 164656-23-9

Formula: C27H30F6N2O2

Molecular Weight: 528.53

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

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 (IC50=6 nM) and Type II 5AR (IC50=7 nM). In LNCaP cells (IC50=1 μM), it suppresses DHT-induced PSA secretion and proliferation, and competes for androgen receptor (AR) binding (IC50=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. H2O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 60 mg/mL (113.52 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

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.

Reference

Frye SV, et al. Curr Top Med Chem, 2006, 6(5), 405-421.
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.

Tel:781-999-4286 E_mail:info@targetmol.com Address:36 Washington Street,Wellesley Hills,MA 02481