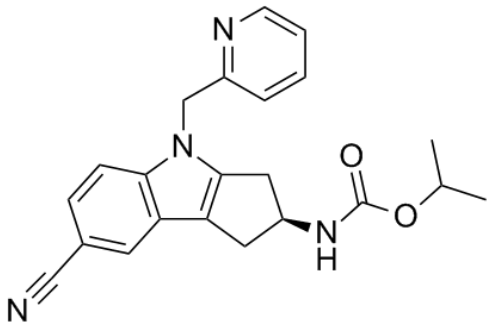
Product Data Sheet

Product Name: LY2452473
Cat. No.: GC31380

Chemical Properties

Cas. No.	1029692-15-6		
SMILES	O=C(N[C@@H]1CC(N(C2=C3C=C(C=C2)C#N)CC4=NC=CC=C4)=C3C1)OC(C)C		
Formula	$C_{22}H_{22}N_4O_2$	M.Wt	374.44
Solubility	DMSO : 62.5 mg/mL (166.92 mM)	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			



Protocol

Cell experiment [1]:

Cell lines PC12 cells (rat pheochromocytoma cell line)

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Preparation Method	Cells were cultured in medium supplemented with 10% fetal bovine serum (FBS). Cells were treated with the LY2452473 (0.1nM-10μM) for 12h.
Reaction Conditions	0.1nM-10μM; 12h.
Applications	LY2452473 dose-dependently antagonized AR activity and MAPK signaling pathway. LY2452473 activated the cAMP signaling pathway.

References:
[1] Popović L, Brankatschk B, Palladino G, et al. Polypharmacological profiling across protein target families and cellular pathways using the multiplexed cell-based assay platform safetyProfiler reveals efficacy, potency and side effects of drugs. Biomed Pharmacother. 2024 Nov;180:117523.

Background

LY2452473 is a selective androgen receptor modulator (SARM)[1-2]. LY2452473 can be used in research related to prostate cancer and hypogonadism-associated conditions[3-4].

In vitro, PC12 cells were treated with LY2452473 (0.1nM-10μM) for 12 hours. LY2452473 dose-dependently and highly selectively antagonized AR activity and inhibited the MAPK signaling pathway. Additionally, LY2452473 activated the cAMP signaling pathway[5].

References:
[1] Mazzarino M, Di Costanzo L, Comunità F, et al. UHPLC-HRMS Method for the Simultaneous Screening of 235 Drugs in Capillary Blood for Doping Control Purpose: Comparative Evaluation of Volumetric and Non-volumetric Dried Blood Spotting Devices. ACS Omega. 2022 Aug 29;7(36):31845-31868
[2] Stacchini C, Botrè F, Comunità F, et al. Simultaneous detection of different chemical classes of selective androgen receptor modulators in urine by liquid chromatography-mass spectrometry-based techniques. J Pharm Biomed Anal. 2021 Feb 20;195:113849.

Caution: Product has not been fully validated for medical applications. For research use only.
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[3] Piper T, Heimbach S, Adamczewski M, et al. An in vitro assay approach to investigate the potential impact of different doping agents on the steroid profile. Drug Test Anal. 2021 May;13(5):916-928.
[4] Karatt TK, Sathiq MA, Laya S, et al. Metabolic study of selective androgen receptor modulator LY2452473 in thoroughbred horses for doping control. Rapid Commun Mass Spectrom. 2023 May 15;37(9):e9491.
[5] Popović L, Brankatschk B, Palladino G, et al. Polypharmacological profiling across protein target families and cellular pathways using the multiplexed cell-based assay platform safetyProfiler reveals efficacy, potency and side effects of drugs. Biomed Pharmacother. 2024 Nov;180:117523.

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