MK-0773

Cat. No.: HY-11027

CAS No.: 606101-58-0

Molecular Formula: $C_{27}H_{34}FN_5O_2$

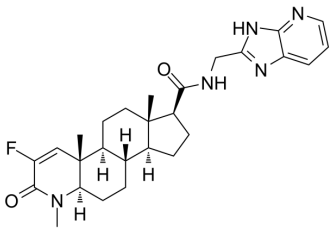
Molecular Weight: 479.59

Target: Androgen Receptor

Pathway: Vitamin D Related/Nuclear Receptor

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 33.33 mg/mL (69.50 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.0851 mL	10.4256 mL	20.8511 mL
5 mM	0.4170 mL	2.0851 mL	4.1702 mL
10 mM	0.2085 mL	1.0426 mL	2.0851 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (5.21 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.21 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.21 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

MK-0773 is a selective androgen receptor modulators (SARMs) that binds to AR with an IC_{50} of 6.6 nM.

IC_{50} & Target

IC50: 6.6 nM (AR)

In Vitro

The IC_{50} of MK-0773 binding to AR is increased 3.5-fold in the presence of 25% rat serum and 13-fold in the presence of 25% human serum, indicating that it binds to serum proteins. The affinity of MK-0773 for AR across species is evaluated using COS cells transfected with AR, and IC_{50} values are very similar in four species (rat, 0.50 nM; dog, 0.55 nM; rhesus, 0.45 nM;

	human, 0.65 nM)[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	MK-0773 (6 and 80 mg/kg, s.c.) produces exposure-related stimulatory effects on cortical BFR and LBM in the OVX rat model. MK-0773 (5, 15, and 80 mg/kg, s.c.) increases seminal vesicle weights, and has reduced effects on the prostate. The partial agonism and tissue selectivity of MK-0773 does not translate into differential effects on lipid metabolism in OVX rats[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration [1]	Rats: Prostate and seminal vesicles are studied in 3-4-month-old 250-300-g rats after orchidectomy (ORX). Nine days after surgery, animals are injected (subcutaneously) daily with test compounds for 17 days, and the weight of the seminal vesicles (SVs) is compared with ORX rats treated with vehicle or DHT as a positive control. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- ACS Omega. August 29, 2022.
- J Pharm Biomed Anal. 2020 Dec 28;195:113849.
- Drug Test Anal. 2020 Dec 7.
- Eur J Mass Spectrom (Chichester). 2016;22(2):49-59.

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REFERENCES

[1]. Schmidt A, et al. Discovery of the selective androgen receptor modulator MK-0773 using a rational development strategy based on differential transcriptional requirements for androgenic anabolism versus reproductive physiology. J Biol Chem. 2010 May 28;285

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