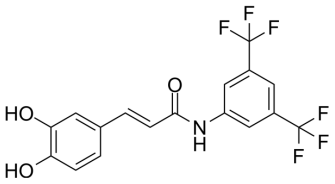
SRD5A1-IN-1

Cat. No.:	HY-152094
CAS No.:	2279077-93-7
Molecular Formula:	$C_{17}H_{11}F_6NO_3$
Molecular Weight:	391.26
Target:	Others
Pathway:	Others

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (255.58 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.5558 mL	12.7792 mL	25.5585 mL
5 mM	0.5112 mL	2.5558 mL	5.1117 mL
10 mM	0.2556 mL	1.2779 mL	2.5558 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (6.39 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.39 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

SRD5A1-IN-1 (Compound 4) is a competitive and covalent steroid 5α-reductase type 1 (SRD5A1) inhibitor with an IC_{50} of 1.44 μM. SRD5A1-IN-1 modulates SRD5A1 function, leading to a lower level of dihydrotestosterone (DHT) production and SRD5A1 protein suppression[1].

IC_{50} & Target

IC50: 1.44 μM (SRD5A1)[1]

In Vitro

SRD5A1-IN-1 (Compound 4) (0.5-2.5 μM; 24 h) decreases SRD5A1 protein expression[1].
SRD5A1-IN-1 (0-2.5 μM; 12 h) modulates SRD5A1 via the dual actions that affect the level of SRD5A1 protein expression and the activity of the SRD5A1 enzyme[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

Cell Line:	HaCaT
Concentration:	0.5, 1, and 2.5 μM
Incubation Time:	12 h and 24 h
Result:	Showed a significant decrease in SRD5A1 protein expression at 1 and 2.5 μM at 24 h, whereas there were no significant changes in the level of SRD5A1 protein at 12 h.

RT-PCR[1]

Cell Line:	HaCaT
Concentration:	0.5, 1, and 2.5 μM
Incubation Time:	12 h and 24 h
Result:	Did not affect the mRNA expression of SRD5A1 at both incubation times.

Cell Cytotoxicity Assay[1]

Cell Line:	HaCaT
Concentration:	0.2, 0.5, 1, and 2.5 μM
Incubation Time:	24 h
Result:	Displayed no significant cytotoxicity (IC_{50}: 29.99 ± 8.69 μM).

REFERENCES

[1]. Lin A C K, et al. Caffeic acid N-[3, 5-bis (trifluoromethyl) phenyl] amide as a non-steroidal inhibitor for steroid 5α-reductase type 1 using a human keratinocyte cell-based assay and molecular dynamics. Scientific Reports, 2022, 12(1): 1-20.

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