Finerenone

Cat. No.: HY-111372

CAS No.: 1050477-31-0

Molecular Formula: $C_{21}H_{22}N_4O_3$

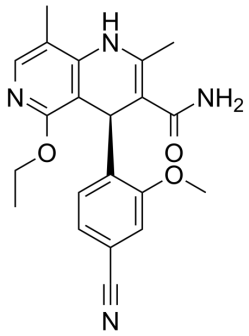
Molecular Weight: 378.42

Target: Mineralocorticoid Receptor

Pathway: Metabolic Enzyme/Protease; Vitamin D Related/Nuclear Receptor

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 : 200 mg/mL (528.51 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.6426 mL	13.2128 mL	26.4257 mL
5 mM	0.5285 mL	2.6426 mL	5.2851 mL
10 mM	0.2643 mL	1.3213 mL	2.6426 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.50 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 1.93 mg/mL (5.10 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1.93 mg/mL (5.10 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Finerenone (BAY 94-8862) is a third-generation, selective, and orally available nonsteroidal mineralocorticoid receptor (MR) antagonist (IC_{50}=18 nM). Finerenone displays excellent selectivity versus glucocorticoid receptor (GR), androgen receptor (AR), and progesterone receptor (>500-fold). Finerenone has the potential for cardiorenal diseases research, such as type 2 diabetes mellitus and chronic kidney disease[1][2].

In Vivo

Finerenone (BAY 94-8862) lowers albuminuria by >40% and significantly reduces systolic blood pressure (SBP) in Munich Wistar Frömter (MWF) rat[1].

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

Animal Model:	Twelve-week-old MWF rat[1]
Dosage:	10 mg/kg
Administration:	P.o.; daily for 4 weeks
Result:	Significantly reduced SBP in MWF rats; led to a significant reduction (>40%) in albuminuria in the MWF model.

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CUSTOMER VALIDATION

- Nature. 2023 Feb;614(7947):326-333.
- Redox Biol. 2023 Oct 24, 102946.

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REFERENCES

[1]. Bärfacker L, et al. Discovery of BAY 94-8862: a nonsteroidal antagonist of the mineralocorticoid receptor for the treatment of cardiorenal diseases. ChemMedChem. 2012;7(8):1385-1403.

[2]. González-Blázquez R, et al. Finerenone Attenuates Endothelial Dysfunction and Albuminuria in a Chronic Kidney Disease Model by a Reduction in Oxidative Stress. Front Pharmacol. 2018;9:1131. Published 2018 Oct 9.

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