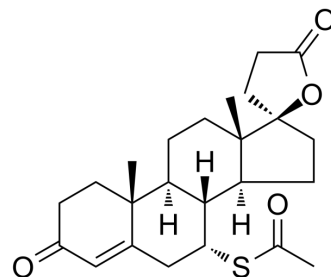


Spironolactone

Cat. No.:	HY-B0561		
CAS No.:	52-01-7		
Molecular Formula:	C ₂₄ H ₃₂ O ₄ S		
Molecular Weight:	416.57		
Target:	Androgen Receptor; Autophagy; Mineralocorticoid Receptor		
Pathway:	Vitamin D Related/Nuclear Receptor; Autophagy; Metabolic Enzyme/Protease		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	1 year
		-20°C	6 months



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 50 mg/mL (120.03 mM)
 H₂O : < 0.1 mg/mL (insoluble)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.4006 mL	12.0028 mL	24.0056 mL
	5 mM	0.4801 mL	2.4006 mL	4.8011 mL
	10 mM	0.2401 mL	1.2003 mL	2.4006 mL

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

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
 Solubility: ≥ 2.5 mg/mL (6.00 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
 Solubility: ≥ 2.5 mg/mL (6.00 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
 Solubility: ≥ 2.5 mg/mL (6.00 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Spironolactone (SC9420) is an orally active aldosterone mineralocorticoid receptor antagonist with an IC₅₀ of 24 nM. Spironolactone is also a potent antagonist of androgen receptor with an IC₅₀ of 77 nM. Spironolactone promotes autophagy in podocytes^{[1][2][3]}.

CUSTOMER VALIDATION

- Circulation. 2022 Oct 4;146(14):1082-1095.
- J Orthop Surg Res. 2024 Feb 19;19(1):147.
- J Healthc Eng. 16 Dec 2021.

See more customer validations on www.MedChemExpress.com

REFERENCES

- [1]. Kim GK, et al. Oral Spironolactone in Post-teenage Female Patients with Acne Vulgaris: Practical Considerations for the Clinician Based on Current Data and Clinical Experience. J Clin Aesthet Dermatol. 2012;5(3):37-50.
- [2]. Fagart J, et al. A new mode of mineralocorticoid receptor antagonism by a potent and selective nonsteroidal molecule. J Biol Chem. 2010;285(39):29932-29940.
- [3]. Dong D, et al. Spironolactone alleviates diabetic nephropathy through promoting autophagy in podocytes. Int Urol Nephrol. 2019;51(4):755-764.
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Caution: Product has not been fully validated for medical applications. For research use only.

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