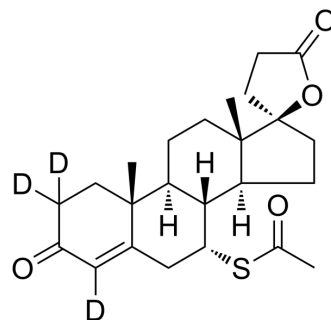


Spironolactone-d₃-1

Cat. No.:	HY-B0561S2
Molecular Formula:	C ₂₄ H ₂₉ D ₃ O ₄ S
Molecular Weight:	419.59
Target:	Androgen Receptor; Autophagy; Mineralocorticoid Receptor; Isotope-Labeled Compounds
Pathway:	Vitamin D Related/Nuclear Receptor; Autophagy; Metabolic Enzyme/Protease; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Spironolactone-d ₃ -1 is deuterium labeled Spironolactone. Spironolactone (SC9420) is an orally active aldosterone mineralocorticoid receptor antagonist with an IC ₅₀ of 24 nM. Spironolactone is also a potent antagonist of androgen receptor with an IC ₅₀ of 77 nM. Spironolactone promotes autophagy in podocytes[1][2][3].
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216.
- [2]. Dong D, et al. Spironolactone alleviates diabetic nephropathy through promoting autophagy in podocytes. *Int Urol Nephrol.* 2019;51(4):755-764.
- [3]. 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.
- [4]. 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.

Caution: Product has not been fully validated for medical applications. For research use only.

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