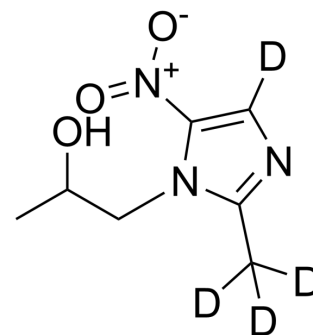


## Secnidazole-d<sub>4</sub>

|                           |   |
|---------------------------|---|
| <b>Cat. No.:</b>          | HY-B1118S2  |
| <b>Molecular Formula:</b> | C <sub>7</sub> H <sub>7</sub> D <sub>4</sub> N <sub>3</sub> O <sub>3</sub>                |
| <b>Molecular Weight:</b>  | 189.21  |
| <b>Target:</b>            | Bacterial; Parasite; Antibiotic   |
| <b>Pathway:</b>           | Anti-infection  |
| <b>Storage:</b>           | Please store the product under the recommended conditions in the Certificate of Analysis. |



### BIOLOGICAL ACTIVITY

|                    |  |
|--------------------|--|
| <b>Description</b> | Secnidazole-d <sub>4</sub> is the deuterium labeled Secnidazole[1]. Secnidazole (RP-14539) is an orally activeazole antibiotic and a imidazole mitigator of <i>Serratia marcescens</i> virulence. Secnidazole, as an analog of acylhomoserine lactones, effectively inhibits QS resulting in the attenuation of <i>Pseudomonas aeruginosa</i> pathogenesis. Secnidazole has antimicrobial activity against many anaerobic Gram-negative and Gram-positive bacterial species in vitro. Secnidazole can be used for the research of various diseases, such as amoebiasis and giardiasis, and bacterial vaginitis[1][2][3]. |
| <b>In Vitro</b>    | 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 <sup>[1]</sup> .<br>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 Feb;53(2):211-216.
- [2]. Secnidazole. LiverTox: Clinical and Research Information on Drug-Induced Liver Injury, National Institute of Diabetes and Digestive and Kidney Diseases, 25 February 2020.
- [3]. Helen S Pentikis, et al. In vitro metabolic profile and drug-drug interaction assessment of secnidazole, a high-dose 5-nitroimidazole antibiotic for the treatment of bacterial vaginosis. *Pharmacol Res Perspect*. 2020 Aug;8(4):e00634.
- [4]. Ahdab N Khayyat, et al. Secnidazole Is a Promising Imidazole Mitigator of *Serratia marcescens* Virulence. *Microorganisms*. 2021 Nov 11;9(11):2333.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA