# Nevirapine-$d_3$

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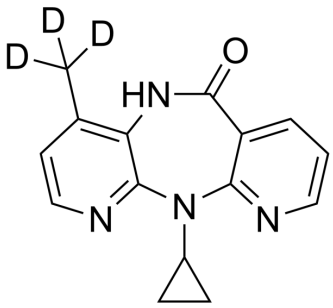
| **Cat. No.:** | HY-10570S1 |
| **CAS No.:** | 1051419-24-9 |
| **Molecular Formula:** | $C_{15}H_{11}D_3N_4O$ |
| **Molecular Weight:** | 269.32 |
| **Target:** | HIV; Reverse Transcriptase; Isotope-Labeled Compounds |
| **Pathway:** | Anti-infection; Others |
| **Storage:** | Please store the product under the recommended conditions in the Certificate of Analysis. |




## BIOLOGICAL ACTIVITY

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| **Description** | Nevirapine-$d_3$ (BI-RG 587-d3) is the deuterium labeled Nevirapine. Nevirapine is a non-nucleoside inhibitor of HIV-1 reverse transcriptase used to treat and prevent HIV/AIDS; with a Ki of 270 μM[1]. |
| **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].<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;53(2):211-216.

[2]. Erickson DA, et al. Characterization of the in vitro biotransformation of the HIV-1 reverse transcriptase inhibitornevirapine by human hepatic cytochromes P-450. Drug Metab Dispos. 1999 Dec;27(12):1488-95.

[3]. Dong JJ, et al. In vitro evaluation of the therapeutic potential of nevirapine in treatment of human thyroid anaplastic carcinoma. Mol Cell Endocrinol. 2013 May 6;370(1-2):113-8.

[4]. Merluzzi VJ, et al. Inhibition of HIV-1 replication by a nonnucleoside reverse transcriptase inhibitor. Science. 1990 Dec 7;250(4986):1411-3.

[5]. Riska PS, et al. Biotransformation of nevirapine, a non-nucleoside HIV-1 reverse transcriptase inhibitor, in mice, rats, rabbits, dogs, monkeys, and chimpanzees. Drug Metab Dispos. 1999 Dec;27(12):1434-47.

[6]. Onasanwo SA, et al. Evaluation of anti-ulcerogenic and ulcer-healing activities of nevirapine in rats. Afr J Med Med Sci. 2015 Sep;44(3):251-9.



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