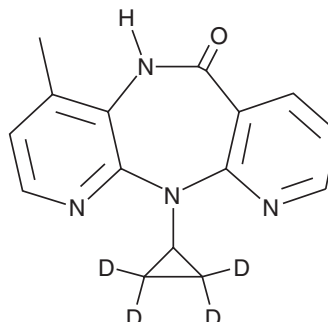


# PRODUCT INFORMATION



## Nevirapine-d<sub>4</sub> Item No. 28093

**CAS Registry No.:** 1051418-95-1  
**Formal Name:** 11-cyclopropyl-2,2,3,3-d<sub>4</sub>-5,11-dihydro-4-methyl-6H-dipyrido[3,2-b:2',3'-e][1,4]diazepin-6-one  
**Synonyms:** NVP-d<sub>4</sub>  
**MF:** C<sub>15</sub>H<sub>10</sub>D<sub>4</sub>N<sub>4</sub>O  
**FW:** 270.3  
**Chemical Purity:** ≥98% (Nevirapine)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>4</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Nevirapine-d<sub>4</sub> is intended for use as an internal standard for the quantification of nevirapine (Item No. 15117) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Nevirapine-d<sub>4</sub> is supplied as a solid. A stock solution may be made by dissolving the nevirapine-d<sub>4</sub> in the solvent of choice. Nevirapine-d<sub>4</sub> is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of nevirapine-d<sub>4</sub> in these solvents is approximately 2.5 and 5 mg/ml, respectively.

### Description

Nevirapine is a non-nucleoside reverse transcriptase inhibitor (NNRTI).<sup>1</sup> It binds to HIV-1 reverse transcriptase and inhibits RNA plus-strand initiation (IC<sub>50</sub> = 0.45 μM). Nevirapine prevents seroconversion and viremia in a chimpanzee model of HIV-1 infection.<sup>2</sup> Formulations containing nevirapine have been used in combination therapy for the treatment of HIV-1 infection.

### References

1. Grobler, J.A., Dornadula, G., Rice, M.R., *et al.* HIV-1 reverse transcriptase plus-strand initiation exhibits preferential sensitivity to non-nucleoside reverse transcriptase inhibitors *in vitro*. *J. Biol. Chem.* **282**(11), 8005-8010 (2007).
2. Grob, P.M., Cao, Y., Muchmore, E., *et al.* Prophylaxis against HIV-1 infection in chimpanzees by nevirapine, a nonnucleoside inhibitor of reverse transcriptase. *Nat. Med.* **3**(6), 665-670 (1997).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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