

# PRODUCT INFORMATION



**PSI-7977-<sup>13</sup>C-d<sub>3</sub>**  
Item No. 25045

**CAS Registry No.:** 2070009-25-3  
**Formal Name:** isopropyl ((S)-(((2R,3R,4R,5R)-5-(2,4-dioxo-3,4-dihydropyrimidin-1(2H)-yl)-4-fluoro-3-hydroxy-4-(methyl-<sup>13</sup>C-d<sub>3</sub>)tetrahydrofuran-2-yl)methoxy)(phenoxy)phosphoryl)-L-alaninate

**Synonym:** Sofosbuvir-<sup>13</sup>C-d<sub>3</sub>  
**MF:** C<sub>21</sub>[<sup>13</sup>C]H<sub>26</sub>D<sub>3</sub>FN<sub>3</sub>O<sub>9</sub>P  
**FW:** 533.5

**Chemical Purity:** ≥98% (PSI-7977)

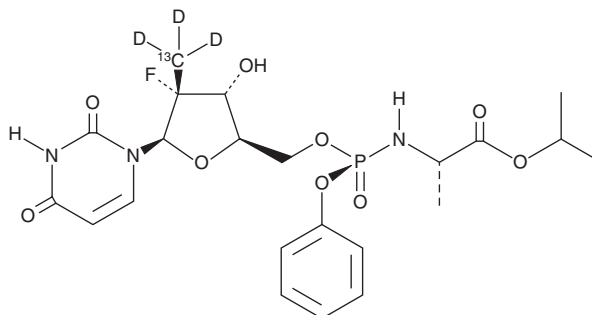
**Deuterium**

**Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>3</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

PSI-7977-<sup>13</sup>C-d<sub>3</sub> is intended for use as an internal standard for the quantification of PSI-7977 (Item No. 15402) 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).

PSI-7977-<sup>13</sup>C-d<sub>3</sub> is supplied as a solid. A stock solution may be made by dissolving the PSI-7977-<sup>13</sup>C-d<sub>3</sub> in the solvent of choice, which should be purged with an inert gas. PSI-7977-<sup>13</sup>C-d<sub>3</sub> is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of PSI-7977-<sup>13</sup>C-d<sub>3</sub> in ethanol is approximately 25 mg/ml and approximately 20 mg/ml in DMSO and DMF.

## Description

PSI-7977 is a phosphoramidate prodrug of PSI-7851, a nucleoside analog that, when phosphorylated, inhibits the RNA-dependent RNA polymerase of hepatitis C virus (EC<sub>50</sub> = 92 nM).<sup>1-3</sup> PSI-7977 is effective *in vitro* and *in vivo*.<sup>2,4,5</sup>

## References

1. Murakami, E., Tolstykh, T., Bao, H., *et al.* Mechanism of activation of PSI-7851 and its diastereoisomer PSI-7977. *J. Biol. Chem.* **285**(45), 34337-34347 (2010).
2. Sofia, M.J., Bao, D., Chang, W., *et al.* Discovery of a β-D-2'-deoxy-2'-α-fluoro-2'-β-C-methyluridine nucleotide prodrug (PSI-7977) for the treatment of hepatitis C virus. *J. Med. Chem.* **53**(19), 7202-7218 (2010).
3. Lam, A.M., Espiritu, C., Bansal, S., *et al.* Genotype and subtype profiling of PSI-7977 as a nucleotide inhibitor of hepatitis C virus. *Antimicrob. Agents Chemother.* **56**(6), 3359-3368 (2012).
4. Gane, E.J., Stedman, C.A., Hyland, R.H., *et al.* Nucleotide polymerase inhibitor sofosbuvir plus ribavirin for hepatitis C. *N. Engl. J. Med.* **368**(1), 34-44 (2013).
5. Lawitz, E., Mangia, A., Wyles, D., *et al.* Sofosbuvir for previously untreated chronic hepatitis C infection. *N. Engl. J. Med.* **368**(20), 1878-1887 (2013).

### 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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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