

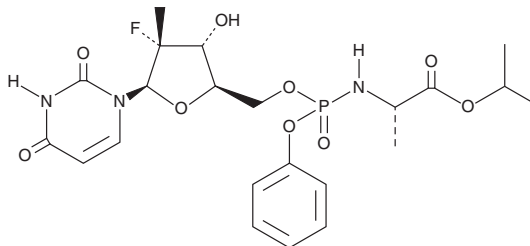
PRODUCT INFORMATION



PSI-7977

Item No. 15402

CAS Registry No.: 1190307-88-0
Formal Name: N-[[P(S),2'R]-2'-deoxy-2'-fluoro-2'-methyl-P-phenyl-5'-uridylyl]-L-alanine, 1-methylethyl ester
Synonyms: GI-7977, Sofosbuvir
MF: C₂₂H₂₉FN₃O₉P
FW: 529.5
Purity: ≥98%
UV/Vis.: λ_{max}: 261 nm
Supplied as: A crystalline 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 is supplied as a crystalline solid. A stock solution may be made by dissolving the PSI-7977 in the solvent of choice, which should be purged with an inert gas. PSI-7977 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of PSI-7977 in ethanol is approximately 25 mg/ml and approximately 20 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of PSI-7977 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of PSI-7977 in PBS (pH 7.2) is approximately 0.2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

PSI-7977 is a prodrug form of the nucleoside analog and RNA-dependent RNA polymerase (RdRp) inhibitor PSI-7411.¹ It is converted to PSI-7411 by cathepsin A and carboxylesterase 1 (CES1) via the intermediate PSI-352707. PSI-7977 inhibits hepatitis C virus (HCV) replication in an HCV replicon assay (EC₅₀ = 0.092 μM). It also inhibits the replication of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in human brain cortical organoids derived from induced pluripotent stem cells (iPSCs) when used at a concentration of 20 μM.² Formulations containing PSI-7977 have been used in the treatment of HCV infections.

References

1. Murakami, E., Tolstykh, T., Bao, H., *et al.* *J. Biol. Chem.* Mechanism of activation of PSI-7851 and its diastereoisomer PSI-7977. **285(45)**, 34337-34347 (2010).
2. Mesci, P., de Souza, J.S., Martin-Sancho, L., *et al.* SARS-CoV-2 infects human brain organoids causing cell death and loss of synapses that can be rescued by treatment with Sofosbuvir. *PLoS Biol.* **20(11)**, e3001845 (2022).

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.

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