PRODUCT INFORMATION

Telaprevir-d_4

Item No. 31317

Formal Name: (1S,3aR,6aS)-2-((S)-2-((S)-2-cyclohexyl-2-(pyrazine-2-carboxamido)acetamido)-3,3-dimethylbutanoyl)-N-((S)-1-((cyclopropyl-2,2,3,3-d_4)amino)-1,2-dioxohexan-3-yl) octahydrocyclopenta[c]pyrrole-1-carboxamide

MF: $C_{36}H_{49}D_4N_7O_6$

FW: 683.9

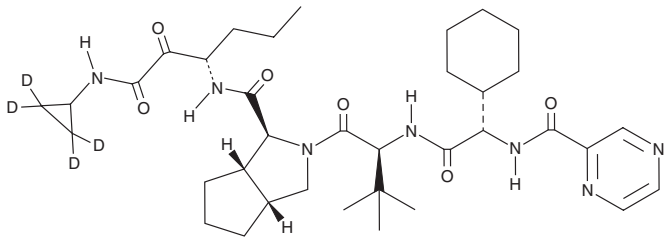
Chemical Purity: ≥95% (Telaprevir)

Deuterium Incorporation: ≥99% deuterated forms (d_1-d_4); ≤1% d_0

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

Telaprevir-d_4 is intended for use as an internal standard for the quantification of telaprevir (Item No. 20054) 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).

Telaprevir-d_4 is supplied as a solid. A stock solution may be made by dissolving the telaprevir-d_4 in the solvent of choice, which should be purged with an inert gas. Telaprevir-d_4 is slightly soluble in methanol.

Description

Telaprevir is an inhibitor of hepatitis C virus (HCV) nonstructural protease 3/4A (NS3/4A; K_i = 7 nM).[1] It inhibits viral replication in genotype 1b HCV replicon cells and isolated human fetal hepatocytes infected with genotype 1a HCV-positive patient sera (IC_{50}s = 354 and 280 nM, respectively). Telaprevir (10-300 mg/kg) reduces plasma levels of a secreted placental alkaline phosphatase (SEAP) reporter gene in a mouse model of HCV NS3/4A protease activity. Formulations containing telaprevir have been used in the treatment of HCV.

Reference

1. Perni, R.B., Almquist, S.J., Byrn, R.A., *et al.* Preclinical profile of VX-950, a potent, selective, and orally bioavailable inhibitor of hepatitis C virus NS3-4A serine protease. *Antimicrob. Agents Chemother.* **50(3)**, 899-909 (2006).

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