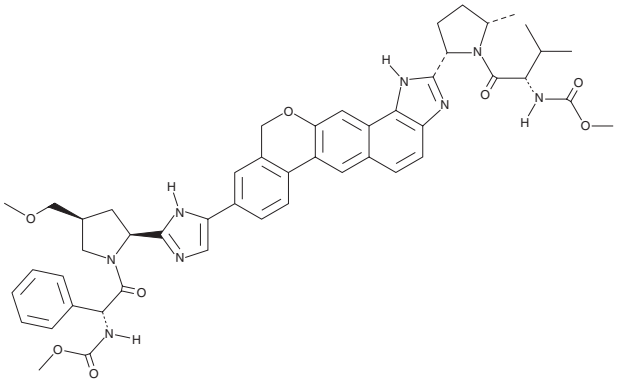
PRODUCT INFORMATION

Velpatasvir

Item No. 21280

CAS Registry No.: 1377049-84-7
Formal Name: N-[(1R)-2-[(2S,4S)-2-[5-[1,11-dihydro-2-[(2S,5S)-1-[(2S)-2-[(methoxycarbonyl)amino]-3-methyl-1-oxobutyl]-5-methyl-2-pyrrolidinyl][2]benzopyrano[4',3':6,7]naphth[1,2-d]imidazol-9-yl]-1H-imidazol-2-yl]-4-(methoxymethyl)-1-pyrrolidinyl]-2-oxo-1-phenylethyl]-carbamic acid, methyl ester
Synonym: GS-5816
MF: $C_{49}H_{54}N_8O_8$
FW: 883.0
Purity: ≥98%
UV/Vis.: λ_{max}: 269, 303, 339 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

Velpatasvir is supplied as a crystalline solid. A stock solution may be made by dissolving the velpatasvir in the solvent of choice, which should be purged with an inert gas. Velpatasvir is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of velpatasvir in ethanol and DMF is approximately 30 mg/ml and approximately 20 mg/ml in DMSO.

Velpatasvir is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, velpatasvir should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Velpatasvir has a solubility of approximately 0.33 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Velpatasvir is a pan-genotypic hepatitis C virus (HCV) non-structural protein 5A (NS5A) inhibitor.[1] It inhibits replication of HCV genotypes 1-6 (EC_{50}s = 6-130 pM in replicon assays). Velpatasvir (100 µM) also inhibits severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) exonuclease activity and enhances remdesivir-induced inhibition of SARS-CoV-2 replication in infected Calu-3 human lung epithelial cells when used at a concentration of 10 µM.[2] Formulations containing velpatasvir have been used in combination with sofosbuvir in the treatment of HCV infection.

Reference

1. Lawitz, E., Freilich, B., Link, B., *et al.* A phase 1, randomized, dose-ranging study of GS-5816, a once-daily NS5A inhibitor, in patients with genotype 1-4 hepatitis. C virus. *J. Viral. Hepat.* **22(12)**, 1011-1019 (2015).
2. Nguyenla, X., Wehri, E., Van Dis, E., *et al.* Discovery of SARS-CoV-2 antiviral synergy between remdesivir and approved drugs in human lung cells. *Sci. Rep.* **12(1)**, 18506 (2022).

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