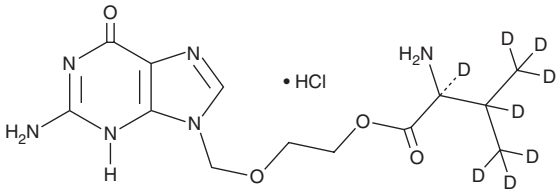
PRODUCT INFORMATION

L-Valacyclovir-d_8 (hydrochloride)

Item No. 31479

CAS Registry No.: 1279033-32-7
Formal Name: L-valine-2,3,4,4,4,4′,4′,4′-d_8, 2-[(2-amino-1,6-dihydro-6-oxo-9H-purin-9-yl)methoxy]ethyl ester, monohydrochloride
MF: $C_{13}H_{12}D_8N_6O_4 \bullet HCl$
FW: 368.8
Chemical Purity: ≥98% (L-Valacyclovir)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_8); ≤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

L-Valacyclovir-d_8 (hydrochloride) is intended for use as an internal standard for the quantification of L-valacyclovir (Item No. 23801) 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).

L-Valacyclovir-d_8 (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the L-valacyclovir-d_8 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. L-Valacyclovir-d_8 (hydrochloride) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of L-valacyclovir-d_8 (hydrochloride) in these solvents is approximately 3 and 10 mg/ml, respectively.

Description

L-Valacyclovir is an L-valyl prodrug form of the antiviral guanosine analog acyclovir (Item No. 14160). L-Valacyclovir inhibits herpes simplex virus type 1 (HSV-1) replication (IC_{50} = 0.84 µM in Vero cells).[1] It is more potent than the stereoisomer D-valacyclovir but less potent than acyclovir *in vitro*, however, it is rapidly converted to acyclovir *in vivo*.[2] Formulations containing L-valacyclovir have been used in the treatment of HSV-1 infections.

References

1. Beauchamp, L.M., Orr, G.F., de Miranda, P., *et al.* Amino acid ester prodrugs of acyclovir. *Antivir. Chem. Chemother.* **3(3)**, 157-164 (1992).
2. Beutner, K.R. Valacyclovir: A review of its antiviral activity, pharmacokinetic properties, and clinical efficacy. *Antiviral Res.* **28(4)**, 281-290 (1995).

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