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Product Data Sheet

Valacyclovir-d₄ hydrochloride

Cat. No.: CAS No.:	HY-17425AS1 1331910-75-8	
Molecular Formula:	C ₁₃ H ₁₇ D ₄ ClN ₆ O ₄	
Molecular Weight:	364.82	
Target:	HSV; Antibiotic; Isotope-Labeled Compounds	
Pathway:	Anti-infection; Others	
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.	

BIOLOGICAL ACTIVITY		
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Description	Valacyclovir-d ₄ (hydrochloride) is the deuterium labeled Valacyclovir hydrochloride. Valacyclovir hydrochloride (Valaciclovir hydrochloride) is an orally active antiviral agent for herpes simplex, herpes zoster, and herpes B. Valacyclovir hydrochloride inhibits HSV-1 W (50=2.9 μg/ml). Valacyclovir hydrochloride is a proagent of Aciclovir (HY-17422)[1][2][3][4][5].	
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

[2]. Valacyclovir. New indication: for genital herpes, simpler administration. Can Fam Physician. 1999 Jul;45:1698-700, 1703-5.

[3]. Lycke J, et al. Acyclovir levels in serum and cerebrospinal fluid after oral administration of valacyclovir. Antimicrob Agents Chemother. 2003 Aug;47(8):2438-41.

[4]. Comparison of efficacies of famciclovir and valaciclovir against herpes simplex virus type 1 in a murineimmunosuppression model. Antimicrob Agents Chemother. 1995 May;39(5):1114-9.

[5]. Dhaliwal DK, Romanowski EG, Yates KA, Valacyclovir inhibits recovery of ocular HSV-1 after experimental reactivation by excimer laser keratectomy. Cornea. 1999 Nov;18(6):693-9.

[6]. Guo A, Hu P, Balimane PV, Interactions of a nonpeptidic drug, valacyclovir, with the human intestinal peptide transporter (hPEPT1) expressed in a mammalian cell line. J Pharmacol Exp Ther. 1999 Apr;289(1):448-54.

Caution: Product has not been fully validated for medical applications. For research use only.

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