Product Datasheet

Technical Data

Formula	$C_{13}H_{20}N_6O_4$.HCl		
Molecular Weight	360.8	**CAS No.**	124832-27-5
Solubility (25°C)*	In vitro	DMSO	72 mg/mL (199.55 mM)
		Water	72 mg/mL (199.55 mM)
		Ethanol	Insoluble

* <1 mg/ml means slightly soluble or insoluble.
* Please note that Capsid Bio tests the solubility of all compounds in-house, and the actual solubility may differ slightly from published values. This is normal and is due to slight batch-to-batch variations.
* Room temperature shipping (Stability testing shows this product can be shipped at 2-8°C for storage purposes.)

Preparing Stock Solutions

Concentration \ Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.7716 mL	13.8581 mL	27.7162 mL
5 mM	0.5543 mL	2.7716 mL	5.5432 mL
10 mM	0.2772 mL	1.3858 mL	2.7716 mL
50 mM	0.0554 mL	0.2772 mL	0.5543 mL

Biological Activity

Description	Valaciclovir HCl, an aciclovir prodrug, inhibits activity of virus **DNA polymerase**, used to treat infections caused by herpes simplex virus (HSV) and varicella zoster virus, and for prophylaxis against cytomegalovirus (CMV).
Targets	DNA polymerase [1]
In vitro	Valaciclovir inhibits the uptake of substrates of dipeptide transporters, such as cefalexin. The metabolism of Valaciclovir to Aciclovir probably occurs within the gut lumen prior to absorption, in the small intestine after uptake but before entry into the portal blood system, and in the liver before entry into systemic circulation. [1] Valaciclovir (Valtrex, Zelitrex), the L-valine ester of aciclovir, increases aciclovir bioavailability by 3- to 5-fold over that achievable with oral aciclovir. Valaciclovir extends the efficacy of aciclovir in the treatment of herpes zoster and genital HSV infections, using less frequent dose regimens but retaining the highly acceptable safety profile established for aciclovir. Valaciclovir is rapidly absorbed and extensively converted to aciclovir and L-valine, the essential amino acid after oral administration. [2]
In vivo	Valaciclovir, the L-valyl ester of acyclovir (ZOVIRAX), demonstrates good oral absorption and nearly complete conversion to acyclovir incynomolgus monkeys, indicating its suitability as an orally administered prodrug. [3] Valaciclovir demonstrates good oral absorption, rapid distribution and elimination, and extensive biotransformation to acyclovir in male CD rats. Valaciclovir is more efficiently metabolized when administered orally, indicating first-pass intestinal and/or hepatic metabolism. Rapid hydrolysis of Valaciclovir in rat liver and intestinal homogenates further suggested the significance of presystemic metabolism. [4]

References

https://pubmed.ncbi.nlm.nih.gov/15140857/ https://pubmed.ncbi.nlm.nih.gov/15989601/ https://pubmed.ncbi.nlm.nih.gov/8149890/

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RETURN POLICY

Capsid Bio's Unconditional Return Policy ensures a smooth online shopping experience for our customers. If you are in any way unsatisfied with your purchase, you may return any item(s) within 7 days of receiving it. In the event of product quality issues, either protocol related or product related problems, you may return any item(s) within 365 days from the original purchase date. Please follow the instructions below when returning products.

SHIPPING & STORAGE

Capsid Bio products are transported at room temperature. If you receive the product at room temperature, please rest assured, the Capsid Bio Quality Inspection Department has conducted experiments to verify that the normal temperature placement of one month will not affect the biological activity of powder products. After collecting, please store the product according to the requirements described in the datasheet. Most Capsid Bio products are stable under the recommended conditions.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

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